An Address

ON

THE DEVELOPMENT OF LONDON HOSPITALS DURING THE NINETEENTH CENTURY.

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THREE EPOCHS OF DEVELOPMENT.

THE development of London hospitals, the changes which have been brought about in their working, their administration, and to some extent their aims, and the improvements which they have undergone have shown, as might be expected, a fairly constant rate of progress during the century; but there have been certainly two, and possibly three, epochs when the development has been very marked. As instances of this I may cite the early part of this century, when efforts began to be directed to the improvement of sanitation; to the years following the Crimean War, when the change of ideas with regard to hospital construction, ventilation, &c., was not less remarkable than the simultaneous development of the art of nursing; and, lastly, the period when the practical application of the science of biology and the introduction of the antiseptic system began to make themselves felt. It is not my intention to dwell too long on the past. Antiquarian research is profoundly attractive to the searcher, but the unearthed results lose much of their interest when set out ticketed and captive on museum shelves. Yet unless we can form some picture of the hospital of 100 years ago we have no material for comparison.

I need only give an outline sketch of London hospitals as they were at the close of the last century and I will limit myself to the principal large general hospitals of London. With lunatic asylums, even when called hospitals, I am not now concerned. I have collected information about some seven of the older London hospitals, and in what I have to say about them at the close of the last and the beginning of the present century I shall seek rather to draw a general picture — every detail of which is to the best of my knowledge accurate; but I shall not endeavour to reproduce, as it were, a photograph of any one in particular. Nor need I specify them. Each hospital had its own individual features then as now (and it is, in passing, distinctly to the interests of the public that such should be the case), but the general standard of the leading hospitals was probably much the same in all. Nor shall I make allusion to the numerous, and often unnecessary, small hospitals which then, it may be, as now, existed. I may ignore institutions run for the gratification of a particular fad or the advertisement of a particular faddist, or worked ostensibly for the benefit of the deserving poor, the promoter being sometimes the poor person whose case, in his own estimation, was the most deserving. Probably institutions of the kind were always to be found, but I am not now concerned with hospitals which were only such in name and not in real object. They may have filled their temporary purposes and vanished. It matters not. If they have disappeared let them have but the epitaph which the poet suggested for himself—

> "Unknown, unhonoured, let them die,
> And let no stone mark where they lie."

CONSTRUCTION AND FITTINGS OF A HOSPITAL 100 YEARS AGO.

In construction the hospital of 100 years ago was of course inferior, as we should judge, to the standard of to-day. Yet the buildings were, as a rule, planned according to the most enlightened views of the moment. In one or two instances, however, an attempt was made to convert buildings designed as houses into hospitals, an experiment which is always unsatisfactory and invariably expensive. The ground plan was usually of the type still frequently adopted. The building was either enclosed like many of the colleges at our universities, or laid out in the shape of a capital letter E or T or H. The separate block system—excellent where there is much space available and a large income—was an innovation of recent date. The windows would seem small to us now, but compared with the prevailing architecture appeared unusually numerous and large. Much, I may mention at once, of my information is derived from the writings of John Howard. The excellence of his philanthropic work with regard to prisons is well known. But his work in connexion with hospitals is quite as good and shows him equally to be many years in advance of his time as a sanitarian. And he set down in writing only what he saw. Within the building the first thing that would have struck the modern beholder would probably have been the rough wooden passages, landings, and staircases, for we live now, architecturally, in an iron and stone age. John Howard in 1789 notes that the staircases in almost all our hospitals are of wood and adds: "The stone staircases in hospitals abroad are more proper." The corridors were often—in fact, usually—narrow and dark. At one large hospital it was noted that they were 8 ft. wide. The windows were sometimes on both sides of the ward, frequently only in one, and in the latter case there was not always even corridor ventilation. The air in much of the ward was therefore stagnant. The wards themselves were commonly poorly lighted and decidedly crowded. The male and female wards were often on the same side of the house. Medical and surgical patients were in some instances mixed in the same ward. As a rule the wards were very low, in one hospital being only 9½ ft. in height; 20 ft. was an average width. Sometimes, however, they were lofty, perhaps 12 ft. or 14 ft. in height. The walls were whitewashed, when they *were* whitewashed, for often they appear to have been exceedingly in want of that process. The floors were often sanded. In a somewhat rare print representing a ward in one large general hospital eleven beds are shown arranged along the wall and five windows are shown. Some of the wards in this hospital contained thirty beds. In the general wards there appears to have been a fair amount of ventilation and the windows were generally kept open, especially on the women's side. Frequently, however, the lower sashes of the windows alone were constructed to open, and sometimes the upper sashes were so cumbersome and heavy that they could not be moved without trouble, so that it is pretty safe to assume that they were more often closed than open. In one hospital the windows of one of the men's wards situated on the ground floor opened inconveniently low down close to a main thoroughfare. It was brought to the knowledge of the governors of this hospital that the friends of patients were in the habit of passing in victuals and drink from the road into the ward. With a laudable desire to put an end to this dangerous practice the governors took the practical step of ordering the lower sashes to be fastened down. They thus substituted for the dangers of insobriety the perils of asphyxia, for it is not very clear how, after the order was executed, any ventilation at all was provided. But at one hospital which was rebuilding gradually at the end of the last century the new wards were "very large and lofty" and free ventilation was secured. Moreover, ventilating openings were provided to communicate with the chimney—a method which, re-invented within the last few years, has now again fallen into disfavour. The bedsteads were usually wooden and almost invariably provided with testers, that is to say, they were fourposters with a square canopy on the top, and in addition generally pretty closely curtained up. Sometimes, as one print shows, they were built right along the wall, forming a series of boxes like cubicles. It could have been no easy matter, therefore, to get to both sides of the bed and in order to reach the windows it was necessary apparently to climb over the beds. The mattresses were usually of straw. John Howard noted with approval that in some cases hair mattresses had been recently introduced. The beds were so arranged that the occupants lay parallel to the wall, and in the print which I have mentioned no space is shown between the beds, perhaps to economise the woodwork. The defects of these wooden bedsteads did not pass without comment. Thus, Samuel Sharp, a surgeon to Guy's Hospital, in the course of a journey to Italy about 1765, noticed with approval in Florence an iron-framed bedstead, and he mentions that attempts to make similar bedsteads in England had failed. The ingenuity of the ironworkers improved or prejudice was slowly overcome, for some forty years later iron bedsteads began to be introduced. Sharp makes an observation on another subject which, though unpleasant, we cannot pass by

and may dismiss by merely quoting what he says. Speaking approvingly of the iron bedstead he argues for its adoption on another ground and tells us (I quote his words), "that in the hospitals at London bugs are frequently a greater evil to the patient than the malady for which he seeks a hospital, and could I have interest enough with the governors to bring about an imitation of this frame I should be exceedingly rejoiced in the comfort it would afford to so many thousands of miserable wretches as are tormented sometimes even to death by these noxious vermin." This statement is strong, but there is abundant evidence to show that it is little exaggerated.

SPECIAL WARDS.

In all hospitals of that date, and for long after, there existed what were known as "foul" wards. The object of these wards was the segregation of particular classes of diseases and the arrangement was not enforced solely on medical grounds. The epithet applied really to the disorders of the patients, but the common supposition that it referred to the ward was not without justification, for in these rooms the ventilation seems to have been more defective than elsewhere. Thus Howard notes when on a visit to one large hospital that in none of the four foul wards for men was a single window open, and at another, in which the other wards are described as fresh and clean: "There were three foul wards in which were 53 men and 27 women and there was no window open."

The extent to which, in a general hospital, patients suffering from different disorders should be treated in a common ward and the extent to which they should be classified according to their complaints and treated in special wards is a question of the day. At present there is a strong tendency to classify; this is the outcome of the modern craze for specialism in medicine. For instance, erysipelas wards—perilously akin to the old "foul" wards—were common a very few years ago. But now that disorder happily occurs rarely and is met by isolation rooms. But the advisability of treating typhoid fever in general wards is a question of the moment, while it is possible that our paulo-post-future successors will marvel at the principles we adopt now in dealing with that scourge of civilised communities—tubercle.

VENTILATION AND SANITATION.

To return from this digression. It was owing, I think, in great measure to John Howard's crusade that improvements in structure, ventilation, and cleanliness in hospitals were gradually effected. The managing authorities were at all times keenly alive to the necessity of providing air, light, and improved sanitation, but were hampered constantly by want of funds.

With regard to the underground sanitary system there is not much to be said—for somewhat obvious reasons. A century ago people if not tolerant of nuisances crying aloud in their midst were at any rate extremely slow to remedy or do away with them. It is not much more than a hundred years ago that the pestilential Fleet Ditch was finally arched over and ceased at length, in Pope's words, to "roll its large tribute of dead dogs to Thames" under the very eyes—and noses—of Londoners. We learn of other imperfections in hospitals from John Howard's observations. He remarks that the water-supply was not particularly abundant and notes in 1790 with much admiration that one hospital then in process of rebuilding had a free supply of water to its lavatories, this arrangement being evidently a rare exception and innovation. There was no great supply of baths. In one hospital Howard notes that in a dirty room in the cellar was a hot and cold bath, which seemed to be seldom used. In another hospital with over 400 patients there was a large cold bath and a room adjoining for a warm bath. In another there were excellent baths in clean and neat rooms, while yet another had a good cold bath, but not used. The conditions, then, to modern ideas seem unfavourable enough, but it was in institutions such as these, assisted by the very imperfectly skilled but often most devoted nursing, that men like John Hunter, Astley Cooper, Benjamin Brodie, and others worked, and not only worked but succeeded.

I may seem to have drawn an unduly dark picture of the old hospitals in the vital matters of ventilation and sanitation. That they were not perfect from the sanitary point of view then must be admitted. I trust that we shall not hinder progress by assuming that they are perfect now. But beyond all doubt hospitals then, as now, were infinitely in advance of other institutions and dwelling houses. Let me quote a passage from a recently published book in support of my assertion. The author of "Collections and Recollections," speaking of the development of humanitarianism, points out that this was evidenced to the eye by the changes in domestic architecture. He writes: "There was less pretension in exteriors and elevations, but more regard to convenience and propriety within. The space was not all sacrificed to reception-rooms. Bedrooms were multiplied and enlarged, and fireplaces were introduced into every room, transforming the arctic 'powdering-closet' into a habitable dressing-room. The diminution of the window tax made light and ventilation possible. Personal cleanliness became fashionable and the means of obtaining it were cultivated. The whole art or science of domestic sanitation—rudimentary enough in its beginnings—belongs to this century. The system which went before it was too primitively abominable to bear elaborate description. Sir Robert Rawlinson, the sanitary expert who was called in to inspect Windsor Castle after the Prince Consort's death (1861), reported that within the Queen's reign 'cesspools full of putrid refuse and drains of the worst description existed beneath the basements. ..... Twenty of these cesspools were removed from the upper ward and twenty-eight from the middle and lower wards. ..... Means of ventilation by windows in Windsor Castle were very defective. Even in Royal apartments the upper portions of the windows were fixed. Lower casements alone could be opened, so that by far the largest amount of air spaces in the rooms contained vitiated air, comparatively stagnant.'" Public opinion in these matters pursued its usual course. People for long—for the best part of a century, in fact—remained indifferent even where they felt something was wrong. The voices of the preachers of science were heard crying persistently that the "sanity of sanities was sanitation," but they were disregarded. Then the usual thing happened; of a sudden public opinion exploded and people said that these defects were abominable, disgraceful, and scandalous, never ought to have been, and should instantly be remedied. There was a mighty stir and the movement affected hospitals also, but these institutions, already far in advance, had no difficulty in maintaining their position and still leading the way. The old superstition—it is no more—that hospital air is necessarily foul is pretty well exploded now. You have but to look to results to recognise that from the first, as now, it was a libel. Still, the improvement in sanitation constitutes one of the greatest features of hospital development during the century.

RECENT IMPROVEMENT IN HOSPITAL MANAGEMENT.

The second great impulse followed shortly after the Crimean War. Public opinion had been roused by the horrors incidental to crowded hospitals. The result in home hospitals was a tremendous outcry for space and light in wards. Cubic capacity was everything for the time till really it seemed as if an ideal type of hospital building would have been a kind of Crystal Palace. Opinion has since toned down on these points and now the tendency is rather to look upon area of floor space as a most important point. A still further and great impulse was given to details of hospital construction within quite recent years by the introduction of the antiseptic system, perhaps the most beneficial and far-reaching discovery of the present century. Like many another great discovery—like most, in fact—others had had a vague inkling of it. A study of history always reveals men in advance of their time, whose minds seem almost inspired with prophetic gifts—men, for instance, like Dr. William Budd of Bristol or Edward Jenner, of the colossal value of whose discovery of vaccination the "conscientious objector" will in a few years convince all men. But the whole credit of the antiseptic system is, of course, to be assigned to the man—Lord Lister—who, focussing the work of others and supplementing it by his own, forced mankind to recognise its full value.

On many details which might be of interest I have no time to touch. In every department progress, though often slow, was decided. The domestic administration of hospitals reflected the customs of the time. Thus, in old days the diet of the patients was much the same as now. The allowance of meat was large; cheese was commonly included. In some hospitals, Howard notes, the allowance of vegetables was very scanty. As might be expected, stimulants were given rather freely. The quantity of beer allowed was

curiously large, three pints being almost the usual quantity in summer and two pints in winter. The beer is usually described as "small," and no doubt justified its title fully. There was constant trouble with regard to the illicit introduction of stimulants, and the resident staff, nurses, and others in the hospitals of former days seemed to require a good deal to sustain them in their arduous duties. Howard speaks with not unmerited disapproval of the common practice that obtained of bringing great quantities of beer into hospitals. Moreover, at some, as he ascertained, the patients could easily get out, there being no proper attention to the gate, so that "the adjoining ginshop often prevented the efficacy of medicine and diet." It was no uncommon thing—it was, in fact, almost a common practice—for the potman to go his rounds of the ward like a medical officer might in the present day.

NURSING.

To the subject of nursing in hospitals I can only briefly allude. Nursing generally has attracted so much attention of late that some may regard it as almost a new adjunct to hospital treatment. This is, however, far from being the case. Sir James Paget, speaking from hospital experience of about the first fifty years of the Queen's reign, remarks that "in the nursing department the happiest changes of all have come about." True enough; but the passage signifies development, not a new departure. It must be remembered that the, so to speak, original nurses were members of religious orders. I date back to the time of St. Vincent de Paule and the Foundation of the "Gray Sisters." These women were bound by vows and were prompted by motives of mortification and penance to engage in work at once philanthropic and a little degrading. But without arguing as to motives they were unquestionably animated by a very high ideal; and I could sometimes wish that this same spirit were more common than it is now. Gradually these nursing sisters departed from their fine traditions. There is overwhelming evidence to show that the original nursing sisterhoods in their zeal were too often inclined to care for more than the bodily welfare of their patients. And so it came to pass that the nursing of the sisterhoods fell into disrepute. They were succeeded by an inferior class. At the beginning and even in the middle of this century nursing was still considered a menial occupation. Still, in every hospital many high-class nurses were to be found devoted to their work and fully abreast of the knowledge of their time. They had not the scientific acquirements of the nurse of to-day, neither had the sanitarian or the medical man. A great change during the century has been the recognition of nursing as a profession, and a fine one; the training and education of nurses as nurses from the beginning of their career, their relegation from the outset to true nursing duties and their separation from the ranks of ward maids, scullery maids, and scrubbers. It is in the all-round standard of hospital nursing that the change is so marked and not so much in the individual excellence of matrons and sisters. As medical knowledge advances scientific nursing should advance too, and I trust that each will develop on its own true lines.

THE DISCIPLINE OF PATIENTS.

The general tone and discipline of hospitals are matters I must allude to, as they bear on the conclusions towards which I have been working all along. In the early part—say, the first quarter—of the century discipline was evidently lax in some respects, but it was unduly stringent in others. A hospital a hundred years ago would scarcely have dared to enforce a curious old ordinance which I find once existed. The porter, whose duty was also to see that the male patients said the appointed prayers of this hospital, had the following instruction: "And whatsoever poor person shall be found a swearer or an unreverent user of his mouth towards God or His holy name, or a contemner of the Matron, or other officer of this house, or that shall refuse to go to bed at the lawfull houres before appointed, him shall ye punish (after once warning given) in the stocks." But though such forcible methods of ensuring discipline would have been out of the question a century ago the spirit which dictated them still prevailed. Hospital patients when able were almost universally required to assist in the work. This is the case no longer. The inmates formerly were kept tightly in hand and never allowed to forget for a moment that they were the recipients of charity, that hospital relief was a favour rendered possible by the benevolence of others, and that for benefits gained they were indebted not only to the medical man who treated them, the sister who nursed them, but also, and chiefly, to the managing authorities representing the subscribers who provided and maintained the institution. I will not trace the change. I do not use here the word improvement. Just consider hospitals as you see them to-day. The contrast is astounding. And those of you who know hospitals and have studied their history will agree with me that no feature in hospital development during the century is so remarkable as the change of relation between the hospital and the public and the fundamentally different view-point from which the public and the hospital patient class have come to regard the hospitals. Many causes have contributed to this—all, in fact, which I have hitherto dealt with.

THE RISE OF HOSPITAL ABUSE.

The old and more stringent laws of discipline were only possible when the hospital patient class was well defined and limited to the very poor. There is good reason to suppose that hospitals in the early part of this century were, on the whole, utilised by the class for whom they were originally intended—that is, the poor and the very poor. There are not wanting indications that the managing authorities were always quite alive to the possibility of abuse. Thus in an old ordinance printed in 1652 of one hospital it is laid down as an order of the hospital to the "chirurgians" "that we utterly forbid and command you that ye by no coloure, pester, or burden this house with any sick or diseased person, for the curing of which person ye before have received a sum or sums of money, upon paine to be dismissed this house." The best guarantee, however, that the comparatively well-to-do did not seek relief in hospitals lay in the fact that these institutions not being much known were rather held in dread. We are not concerned with the kind of ailments which enabled a poor person to gain admission to a hospital. For the most part they must have been much the same as they are now. One London hospital reserved a certain number of beds—14 out of 71—for incurable cases. In Bowles's print of Guy's Hospital, dated 1725, a scroll across the sky bears the inscription "Guy's Hospital for Incurables"; but Guy in his will made it abundantly plain that he desired the benefits of the institution to be given to those whose ailments admitted either of relief or cure, and it does not appear that at any time cases such as we should now class as incurable were admitted. They had to seek relief, as is very right and proper, from the parish or the State and were not considered fit objects for private benevolence. In the same way in another of the old ordinances of St. Bartholomew's Hospital the "chirurgians" were directed to "signify to the almoners or hospitalers their judgment of the diseased person brought before them and to signify without all affection whether he or she be curable or not, to the intent there may be none admitted into this house that shall be incurable to the great let and hindrance of the curing and helping of many another, nay, none rejected and put back that are curable to the great slander of this house and the displeasure of God." A previous passage refers to the poor of this hospital and the "chirurgians" were directed "to show equal attention to the poorest, destitute of all friends and succours, setting aside all favour, affection, gain, or lucre." The letter of such ordinances might read differently in these days but the spirit has prevailed and should prevail. At most hospitals the patients made payment, that is, the part payment system was in early days enforced. Some, however, from the very first accepted no sort or kind of fee, reward, gratuity, or payment, and to their great credit refused to alter their rules even when in very low water financially, preferring to close some of their wards rather than abandon any of their principles. At one hospital the "parish poor and soldiers" had to pay 4*d*. per day for their subsistence. At another fees were taken for the admission of patients. For clean patients, 2*s*.—viz., 1*s*. for the sister, 6*d*. for the nurse, and 6*d*. for the beadle. For foul patients, £1 5*s*. 8*d*.—that is to say, 5*s*. for flannels, 18*s*. 8*d*. for two months' subsistence at 4*d*. per day, and 2*s*. for "ward dues." At another hospital every clean patient had to pay 3*s*. 6*d*. on admission and a "foul" patient 10*s*. 6*d*., besides 4*d*. a day. These latter patients had also to pay the nurses for washing their linen. Howard notes that at another hospital he saw a woman bring a child and "with tears leave the fee of 2*s*. 9*d*. for the nurse and 6*d*. for the steward." The foul patients

for this hospital paid 7s. This part-pay system was gradually dropped entirely, and the methods which some hospitals adopted from the outset of exacting no payment whatever and of holding that anybody capable of paying was thereby disqualified for admission became general. Lack of funds, however, within recent times has again caused the payment system to come into vogue to a limited extent, though on a different kind of footing. But it shows happily signs now of soon coming to an end in all general hospitals. Of course, many cases that would, a hundred or fifty years ago, have been legitimately classed as "incurable" would now no longer fall into that category, for with the advance of medicine and surgery many who would previously have been deemed hopeless can be now, if not set on the high road to recovery, at least materially relieved. This diminution of the cases formerly deemed incurable has of course largely added to the number of eligible cases, and the fact may as well be faced at once that the number is likely to increase. It would be true and easy of proof to contend that the beneficent work of hospitals has enormously increased during the century, and that they are highly efficient now; but this would be a cheap boast. We may hug ourselves with the comfortable conviction that things now are better than they were formerly. A certain Pharisee adopted this attitude of mind and was not highly commended for so doing. It is as unquestionable that improvement and progress have been made as it is certain that the final point has not been nearly reached and that a future generation will far surpass the standard of to-day. The point I wish to repeat and emphasise is that the improvement has brought reputation to hospitals which formerly they lacked. If people did not criticise hospitals so much in old days it was only because they paid less attention to them. Hospital patients in very early times were almost cut off from mankind, as if they were lepers, and, indeed, mediæval hospitals were as much founded for the protection of the sound as for the relief of the sick. They were, in fact, regarded much as we regard hospitals for infectious diseases now. Gradually and during the present century all this has altered. Hospitals have become better known, and the public generally, as well as the beneficent and charitable, who support them have begun to take an interest in their medical and social aspect. People became aware that patients in hospitals were not all suffering from highly contagious and infectious disorders, so that it was positively dangerous to go into such institutions. Such ideas, of course, only arose from ignorance of these places, but they were none the less widely entertained. The establishment of infectious hospitals and the better understanding of infectious disorders again improved vastly the general reputation of hospitals. But it all comes in short to this—the better you build, ventilate, and drain, the better you officer and nurse, the more you modify regulations in the direction of placing the patient who pays nothing and costs much in the same position as the patient who pays more than he costs—the more you pursue these lines the more you drive the benevolence of the supporters into the background from the hospital patient's point of view and the more you encourage the feeling of prescriptive right to hospital treatment. And from these causes, too, it has gradually come about, as I have been trying throughout to indicate, that during the century hospitals, whether founded and supported by the voluntary subscriptions of the charitably disposed or by the munificent endowment of private individuals, have become public institutions. I think this fact is too apt to be overlooked. I offer no opinion as to whether this state of things is matter for approval or regret. I only desire to draw your attention to matters as they are.

PROPOSALS FOR HOSPITAL REFORM.

The increased reputation of, or, if you prefer the phrase, the increased interest taken in, hospitals gradually brought into prominence the alleged existence of evils, rather vaguely designated under the generic title of "hospital abuse," that it is stated have grown, are growing, and ought to be diminished. The results of the inquiry of the Select Committee of the House of Lords in 1892 are probably fresh in your minds. The practical conclusion set forth in that most admirable though almost too impartial report amounts broadly to an admission that some "abuses" did exist, but to a far less extent than had been alleged. Recently there has been much talk of hospital reform, though hitherto very little action. Many proposals have been put forward for modifying and altering the work and the administration of hospitals. Some of these are quite outside my scope and I can only just mention them. Of one you have already heard here—the proposal for a Central Hospital Board. The idea is a good one, but there are two great difficulties to be overcome before it can be called into existence. One of these difficulties is the representation, and the second is that the board, however well constituted, could do little effective work unless it had the command of adequate funds. Another proposal of a much more sweeping character is to nationalise or municipalise hospitals, throw their expenses, that is to say, on the taxpayers or the ratepayers. This is a subject not for the end of one lecture but for a course of several lectures. The change may come, but it seems as yet happily far off, and when I point out to you that if the rates or the State take over hospitals they must perforce take over medical education also you may recognise that the question is not to be approached without due consideration. Possibly the first step may be to recognise that hospitals have gradually become public institutions. The granting of subsidies from the State is a method which finds little favour in this country. And the system which obtains in France of recognising particular institutions as of "public utility" is not adopted. The position of our hospitals really is that they are "recognised as of public utility" and have to bear the responsibility attached to that position, but that they do not get the consequent grant. The much-needed subsidy has again to be supplied by individual effort and by charitable appeals. The Hospital Sunday Fund and the Prince of Wales's Fund are attempts to do what some think the State should do, and not a few think the State will have to do before a great many years. The present subsidising bodies exercise only a very limited control. A State subsidy would mean some degree of State control, though possibly leaving intact to a great extent the individuality of the different hospitals. On this ground the Select Committee did not report in favour of the plan. Through the State alone I believe will it be found possible to institute and maintain a really efficient Central Hospital Board with sufficient power to exercise the necessary control and sufficient permanence to ensure good working. At the same time, let me express my conviction again that I believe, as strongly as I hope, that such solution of the difficulty is yet far distant. I only hope so, for as far as I have studied the question I feel assured that State or rate hospitals would be less efficient than the present institutions and would cost from three to five times as much. The day may come for this change, but when it does it will not be for the good of the poor. It will diminish the efficiency of hospitals, damage seriously medical education, and benefit only the hospital medical staff who will flatly refuse to work any longer without adequate payment.

THE OUT-PATIENT QUESTION.

I may only touch on one other subject of hospital reform—namely, out-patients. Let me state at once my own conviction that an out-patient department at general hospitals is essential in the interests of the poor and in the interests of medical education. Now it must be borne in mind that the out-patient system has grown up during the present century. At my own hospital—St. George's—they seem to have begun as we know them now about sixty years ago. The assistant physician and assistant surgeon of to-day are mainly concerned with out-patients. But this was not the case a hundred years ago. At St. George's Hospital we had no assistant physician till 1830, and the assistant surgeons were really appointed as assistants to the surgeons when the latter applied for such help. Patients who had been in the hospital often attended for a time after their discharge, but such were obviously on a wholly different footing. Mr. Loch, who has inquired closely into this point, finds the first mention of out-patients in 1564 at St. Bartholomew's Hospital. The physicians then had 8 under their care. In 1749—nearly 200 years later—the number had increased to 200. I believe that these were not out-patients in the modern sense but principally in-patients who had been discharged and whose progress was being watched and to whom some treatment was allowed.

Now there is no doubt at all that the number of out-patients at hospitals has increased very largely of late. Under the heading of "out-patients" are generally included in statistical returns what are known as casualties, and it is especially in the list of casualties that the numbers have swollen. Thus I find by a published return at one hospital

that the number of out-patients is almost exactly ten times as great as it was sixty years previously. It is stated that the number of patients properly qualified for hospital relief is not increased in anything like the same proportion, and that many must therefore be seen at hospitals who, according to the original intentions of the founders, would have been deemed ineligible. It is asserted, too, that this relief is almost indiscriminate and that the ease with which a person can obtain gratuitous treatment with little or no inquiry has the twofold effect of pauperising the applicants and depriving the practitioner of his means of livelihood. As to the extent of this "abuse" I will only say this—that I am as convinced that some exists as I am certain that its amount is greatly exaggerated. I have endeavoured to suggest that the increased efficiency and the improved repute of hospitals accounts for the increase of the work they try to achieve. While this is matter for congratulation we must at the same time face the altered condition of affairs. If any "abuse" at all exists it ought to be checked, and even if there is no abuse preventive measures to guard against its occurrence are none the less desirable in the interests of the hospitals, of the public, and of a large, hard-working, and most deserving body of men whose cry is bitter and not without justification—I refer to the general practitioners whose work lies among the poor.

Limitation of the number of out-patients is a reform of a much larger character than people who are not conversant with hospital statistics might suppose. The system of limitation has stood well the test of experience. If generally adopted by London hospitals the beneficial effect would be marked and far-reaching. There are signs that the principle of limitation is becoming more widely accepted, and I have little doubt that if a Central Hospital Board could be constituted in which all the leading hospitals were represented the question would be one of the first to be discussed and probably settled. The individuality of different hospitals is a great advantage, but this need not be carried to the length of preventing joint action altogether in a matter of public importance.

In Conclusion.

Of other minor "reforms" which have been recently advocated I have left no time to speak. Some interesting suggestions have been put forward in a scheme of the Belgrave Hospital for Children, recently published and commented on in THE LANCET of April 30th, 1898. The principle underlying many of these proposals is the recognition of the general practitioner as one whose interests may be affected prejudicially by hospitals and whose claims to consideration are therefore admitted. The scheme is novel and as it is meeting with support more is likely to be heard of it.

I have alluded to many changes, but in one all-important respect there is little or none to record. All the hospitals which I have had in mind were founded on benevolent, judicious, and enlightened general principles, and these, crystallising gradually into traditions, have been faithfully carried out by those responsible for their management and government.

BRIGHTON AND SUSSEX THROAT AND EAR HOSPITAL.—The new building in Church-street, Queen's-road, Brighton, will be publicly opened by the Duke of Norfolk on Tuesday, Nov. 29th, at 12 o'clock. The building, which has been erected at a cost of £4600, will accommodate 20 in-patients, besides having a convenient out-patient department.

THE PLAGUE.—The latest telegraphic intelligence from India is not by any means satisfactory. The epidemic continues to prevail in Bombay city and district, at Karachi, and at Bangalore. Six districts of the Madras Presidency are also infected as well as some other stations. The Government of India have asked for more medical aid to be sent out for plague duty in the Madras Presidency.—— News has been received from St. Petersburg of a very severe outbreak of plague at the village of Kischlah, in Central Asia; out of a population of 350 there have been 225 deaths. The Duke of Oldenburg, president of the Government Commission which has been appointed by the Emperor to devise means for arresting the propagation of the plague, was expected at Samarkand with eighteen doctors and officers of health and fifteen Sisters of Charity, as well as four cooks. It will be the first time that a member of the Imperial family has visited Turkestan.

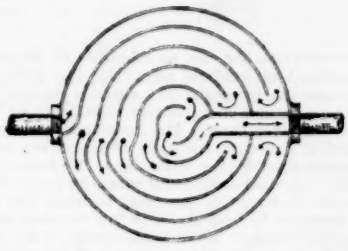
ON THE TREATMENT OF NEURALGIA AND RHEUMATISM BY CURRENTS OF HOT AIR, WITH SOME ACCOUNT OF THE APPARATUS EMPLOYED.

BY WILLIAM TAYLOR, M.D., F.R.C.P. EDIN.

ONE of the most obstinate cases of rheumatism I ever had to treat was contracted by a patient whose writing-table was in close proximity to a window in his counting-house. There he sat and suffered without ever suspecting that a slight draught from that window was the immediate cause of his trouble. It did not create that trouble, for its foundation was in his rheumatic constitution, and the keenness with which he entered into his business affairs made him forgetful of cold feet and a certain chilliness of the arm and knee nearest the window. It was only the consequent illness that awakened his recollection. This is but one example of what must meet the experience of every member of our profession from day to day, and the very mention of it must recall numerous instances of less obstinate but more painful affections, classed under the general term of neuralgia, which owe their existence to an equally slight and far more transient exposure. A consideration of such cases and their apparent causation suggested to me that the application of a current of hot or warm air might perhaps have the opposite effect to that which I believed to be produced by a current of cold air. The difficulty which met me and which I set myself to solve was how to obtain such a current. I found that air, although easily warmed, is very rapidly cooled, so that it cannot be carried far from the source of its heat, that the degree of temperature is difficult to regulate so as to keep it within extremes, and that to confine its action within definite limits so as to act on and not beyond a prescribed area is no easy task.

My first device consisted of a flattened coil of brass tubing bound together and placed over the flame of a Swedish "Primus" lamp. Through this coil by means of bellows a current of air was forced which became heated in transit and emerged hot at the free end. The tubing was difficult to coil and the process employed was tedious and expensive. It was superseded by a hollow casting made from a design suggested by the plan of the "walls of Troy" (Fig. 1). It

FIG. 1.

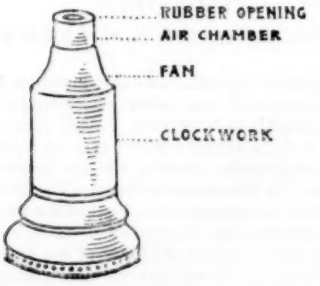


is circular in shape and the interior is subdivided into a tortuous channel in traversing which the air becomes heated and emerges directly from the hottest part at the centre. I employed this with benefit in an obstinate case of torticollis and in recent rheumatism of the knee-joints. It may still be useful in such cases, but it is not suitable for the treatment of pain affecting limited areas such as have to be dealt with in facial neuralgias. It is very heavy, not difficult to heat, but when heated dangerous to handle. The blowing of the bellows is very tiresome and the heat and fumes from the lamp become very disagreeable. These inconveniences have been remedied by the substitution of glass for brass, a rotatory fan for the bellows, and electric heat for the offensive lamp. In the attainment of these improvements I have to acknowledge the invaluable assistance of my friend Dr. Milne Murray.

The apparatus which I next devised and which I now use is composed of two parts—one of metal and the other of

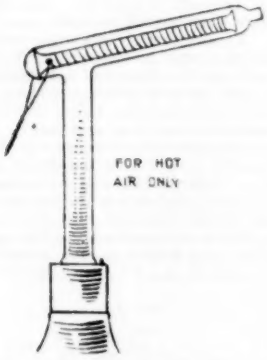
glass (Fig. 2). The metallic portion consists of a shell containing a rotatory fan, the clockwork or electro-motor which actuates it, and a small air chamber above the fan, which is perforated on the top by a rubber-lined orifice adapted for

FIG. 2.



the reception of the glass portion of the apparatus (Fig 3). This consists of two tubes, one within the other. The lower end of the outer tube is inserted into the opening on the top of the air chamber, the other end is free. It may be straight, or fashioned into a variety of shapes, and may or may not terminate in a contracted nozzle. Close to the free end there may be an expansion for the reception

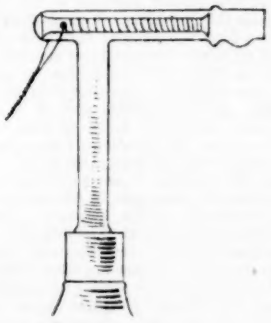
FIG. 3.



of volatile substances for use as inhalants or as auxiliaries in the treatment of localised pain (Fig. 4). Such medicaments are inserted by means of a suitable pipette into the expanded portion and are speedily volatilised by the hot current passing over them. The inner tube is wound round with a spiral of fine wire, the ends of which are connected with terminals fixed in the outer tube. To these terminals are attached insulated conducting wires, by means of which a current of electricity is conveyed through the spiral of sufficient strength to heat it. The fan revolves at a rapid rate and sends through the tubes a current of air which in its transit becomes heated and leaves the mouth of the outer tube in a condition suitable for direct application to the affected part. Intermediate between the source of electricity and this apparatus is placed a lamp-holder supplied with lamps of such calibre as to interpose a suitable resistance to the electric current. By means of these the temperature of the heated air can be suitably regulated. (If the voltage be from 100 to 130, as in many parts of London, two 16 candle lamps may be introduced into the circuit. If the voltage be 230, as in Edinburgh, two 32 candle lamps may be used.)

The lamp-holder (Fig. 5) has four terminals. Two of these at one end communicate through conducting wires with the terminals of the coiled wire, the other two are attached to a length of similar wire which terminates in an adapter suited for fixing into the socket used for holding the stem of

FIG. 4.



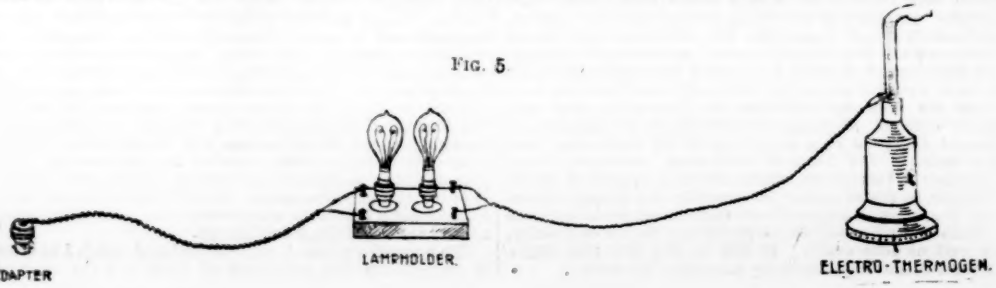
an ordinary incandescent electric lamp. The name which has been suggested to me for the apparatus is the electro-thermogen (Fig. 6).

When all the attachments are completed as above, and not till then, one of the house lamps in any convenient place should be removed from its socket and the adapter inserted in its place. This done, the lamp in the lamp-holder will immediately glow provided that there is no defect in the connexions (if the lamps do not glow the adapter should be removed from the lamp socket *before* the connexions are examined). The clockwork should then be wound up fully and the hot-air current will begin to flow.

I do not know to what degree of heat the temperature of the air can be raised by the electro-thermogen. I tested it with my own thermometer and found that it rose rapidly until it reached 212°. It rose even higher, for in a few moments it burst the bulb. This satisfied me as to its capabilities.

We are told that in the Arctic regions, where the air is still, persons can endure a far lower temperature than where the air is in motion, so that the effect experienced is not regulated so much by the degree of cold as by the successive impinging of cold particles upon the surface, say, by the action of a gentle breeze. Hence the detrimental effects of a slight draught. With heat a similar rule holds good. In a still temperature of 260° a beef-steak can be cooked in 33 minutes, but if air of the same temperature be blown upon the meat by bellows it can be cooked in 13 minutes. In accordance with these facts I have found that in treating neuralgia a moderate current long continued is far more effective than a more intense current of short duration. The almost invariable remark of patients when so treated is,

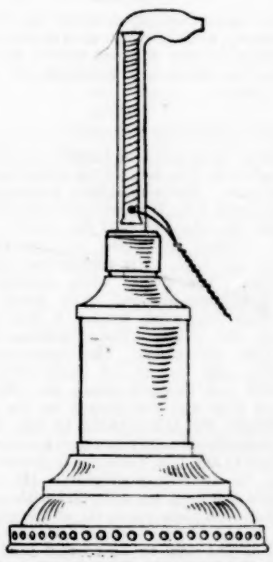
FIG. 5



"That is very soothing," and no more welcome observation could be made, for anything that is to benefit one suffering from neuralgia must be of a soothing nature.

In applying this treatment for certain cases of persistent long-continued neuralgia I have been struck with the existence of thermal anæsthesia in the affected areas. These patients do not feel either the soothing or burning effect of the hot-air current. In one case, that of a woman aged twenty-two years, who had suffered from neuralgia for thirteen months in a spot 1 in. distant from, and in line with, the left eyebrow, this anæsthetic condition was present. On applying the hot-air current I was surprised to find that she made no remark. I increased the temperature but still she did not seem to feel it, although the adjacent parts were sensitive. By-and-by the surface of the affected part became blanched, and I told

FIG. 6.



THE ELECTRO-THERMOGEN FOR GENERAL PURPOSES.

the patient on leaving that if it blistered it would do no harm but she should return and let me see it. This was at 10 A.M. At 2 P.M. she returned with the cleanest, most perfect blister I ever saw. It occupied the site of the neuralgic spot. It was of the size and shape of a half-walnut and filled with a serum of a deep orange colour. On again questioning her as to pain she said: "I felt no pain then from the heat nor do I feel any now from the blister." The neuralgia did not return.

Another patient, aged twenty years, had suffered for eleven months from severe pain affecting the left ear. The auricle was tumid and so painful that she had been unable for months to rest that side upon the pillow. Thermal anæsthesia was present, and the result of treatment by hot air was a crop of small blisters clustered round the meatus. This was after five applications, but before the blisters appeared the pain had gone and the patient was able to sleep on the affected side. There was deafness on that side. The first day she could only hear the ticking of my watch when it was applied to the ear. At the end of the fifth day she could hear it 3 in. away. This leads me to hope that in the treatment of some cases of deafness associated with morbid conditions of the fifth nerve the treatment by a hot-air current may be of service.

In paralysis of the portio dura (where, of course, there is no cerebral lesion) we find a condition which, on theoretical grounds at least, ought to be benefited by the hot-air treatment. The history and appearance of such cases are familiar to most of us. A person in health exposes one side of the face to a slight draught, say, in a railway carriage or elsewhere. This is followed by pain, stiffness, and ultimately paralysis of that side of the face. The unequal balance so occasioned between the opposing muscles gives rise to great distortion of the features, but sensation remains unimpaired as the seventh pair alone is involved. Recovery may take place in three weeks or it may be delayed for years. Within such wide possibilities it is difficult to estimate the proportion of improvement which may be due to any treatment, but the stimulus conveyed by the hot air seems to favour recovery, and it is always acceptable and comforting to the patient.

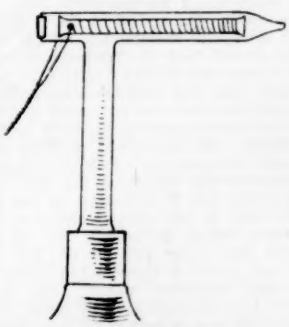
The unexpected sometimes happens. A medical friend of mine had suffered from toothache for three days, and he informs me that five minutes' application of the hot air current by means of the electro-thermogen cured him. This was before the commencement of the winter session. The toothache had not returned when I last saw him on June 13th. Such a result I could never have anticipated. Another medical friend informs me that he has found it of benefit to a patient affected with twitching of the facial muscles. This was also an unexpected relief.

One evening a woman entered my consulting-room complaining that the act of swallowing caused her great pain on the right side of the neck. She informed me that she had suffered from a relaxed throat, which was better, but she appeared to be considerably run down. I asked her to swallow a mouthful of water and in doing so the muscles of the neck immediately jerked out in painful and continued spasm. I applied the hot air for ten minutes and she swallowed more easily, again for ten minutes and there was a further improvement, then again and at the end of half an hour she could swallow without wincing. The treatment was resumed on two following days for minor attacks, but no return of the spasm occurred after the third day. This was a purely functional disorder and it might have been relieved by other means; possibly a hypnotist might have been more speedily successful, and I merely give it as one variety of the cases in which hot air may be employed with some hope of success.

The electro-thermogen has also been of use in such cases as those in which medicated inhalations are usually of any avail. These include clergymen's sore-throat, spasmodic cough, asthma, bronchitis, and most other affections of the throat and larynx. In the initial stage of catarrh and in that distressing tickling cough which often accompanies or follows influenza I have found that a solution of cocaine in oil of cloves when volatilised and inhaled gives considerable and often speedy relief. In cases of sciatica accompanied by cough in which each paroxysm produces a sharp pain in the area of the affected nerve I have found that such an inhalation relieves the cough whilst the application of hot air to the pained limb relieves the sciatica. The chief advantage possessed by the hot air over steam seems to be that the substances administered are volatilised instead of vapourised, so that the particles are much more finely disintegrated and are conveyed to the air-passages by dry heat without the accompaniment of steam, which is less penetrating and always leaves a disagreeable and dangerous moisture about the face and neck.

By the kindness of Dr. Allan Jamieson I have been placed in possession of an unexpected addition to the list of ailments

FIG. 7.



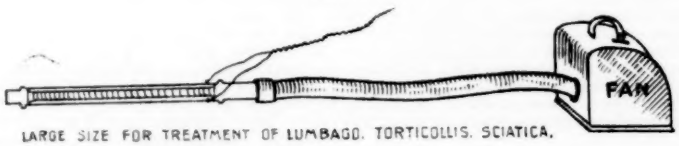
FOR CAUTERIZATION

in which the electro-thermogen may be of possible service. He has drawn my attention to a paper in *La Presse Médicale* of Oct. 30th, 1897, in which M. Hollander of Berlin relates

how he treated a case of lupus of the face by a current of air heated to the temperature of 300°. For this purpose he employed a gas flame in which was placed a pointed metallic tube which became very hot. The air was blown through this by means of an indiarubber hand-bellows and so heated. The hot air current produced an escharotic effect on the diseased surface with great exactitude, without metallic contact and without encroaching as steam does on the healthy textures adjoining. The result, as shown by the illustrations accompanying the article, was very successful. In similar cases the electro-thermogen shown with the pointed nozzle may be found useful (Fig. 7) for cauterisation.

For the treatment of lumbago, torticollis and painful affections of the knee joint and other large surfaces I have used the larger apparatus shown in the illustration (Fig. 8). In this the air is blown from a separate fan in a much stronger current. The glass tube is from 14 to 18 in. long and 1¼ in. in diameter. It is adapted for the full voltage of the electric supply without the intervention of resistance lamps, and is very convenient and effective in the treatment of the diseases named as well as those cases of shingles which are accompanied and followed by persistent pain.

FIG. 8.



LARGE SIZE FOR TREATMENT OF LUMBAGO, TORTICOLLIS, SCIATICA, AND AFFECTIONS OF LARGER JOINTS.

Edinburgh.

A CASE OF FRACTURE OF THE INNER TABLE OF THE SKULL WITHOUT INJURY TO THE OUTER TABLE.

BY R. F. STANDAGE, L.R.C.P. LOND., M.R.C.S. ENG.,
CAPTAIN I.M.S., S.M.O. UNYORO FIELD FORCE.

DURING the fighting against the Soudanese mutineers around Jaruba Fort on the east bank of the Nile a picket of the enemy was surprised on Jaruba Hill, and a corporal, a Somali in the Uganda Rifles, received a Martini bullet wound on the left side of the head while pluckily rushing a hut held by the enemy. This occurred at 4 A.M. on Aug. 4th, 1898. He was dressed by the hospital assistant who described the wound as a "scalp wound." I saw the patient at 5 A.M. The man was pale, with a small, thready pulse, and said that he had been sick. He did not complain of pain in the head, but showed me his right hand in which there was a sensation of "pins and needles." He was extremely excited, rushed wildly up and down the small hill fort which he had assisted in taking, and was very anxious to join in the advance on the main fort which was just beginning. I was much hurried, as firing had commenced, but I thought it as well to examine the wound, though I was assured that the bone was not injured. My examination confirmed this and I ordered the man to be put on a stretcher and went off to join the general advance. The attack successfully concluded, this man, with other wounded, was carried back to the base hospital at Mruli and I accompanied him. He vomited twice on the road. On arrival at the hospital he was put to bed and a careful examination of his condition was made. This showed that the temperature was sub-normal and that the pulse was 90 and small; that the pupils were contracted and equal and responded naturally to light, and that the tongue was clean and protruded in the middle line. The patient answered questions perfectly rationally though somewhat slowly. He complained of thirst and of pain in the right hand, the grasp of which was weakened. It was supposed that he had fallen on the hand and that the weaker grasp was due to stiffening of the tendons. The scalp wound was in an oblique direction from right to left and from before backwards, was 3¼ in. long and situated over the upper part of the left parietal bone. The bullet had ploughed through the tissues of the scalp, making a long furrowed wound. In the middle of its course it had removed a small piece of pericranium, exposing the skull over an area as big as a threepenny-piece. A most careful examination with the fingers and a probe failed to disclose any depression or fracture of the outer table of the skull. I roughly mapped out the line of the Rolandic fissure by joining a point 2 in. behind the bregma to a point 2¾ in. behind and 1 in. above the right external angular process. The point of impact of the bullet on the skull was found to be ¼ in. behind the lower half of the upper third of that line. The wound was antiseptically dressed and a calomel purge was given and milk diet was ordered.

On the next day (August 5th) the patient's temperature was 99·2° F. During the night he had two attacks of bleeding from the nose. His tongue was clean and protruded straight. The pupils were normal and reacted to light and accommodation. The pulse was 96 and much fuller and somewhat hard. I had no apparatus for examining the urine. The condition of the right hand was much the same. The fingers could only be moved slightly, and though he could take hold of my hand he could not forcibly grasp it. His answers to questions were slow and not always to the point. This, I thought, might be attributable to his limited knowledge of Hindustani—our only common tongue—so I ordered his native officer to ask him questions in Somali. The officer reported him to be "very stupid." He complained of hunger, but was still kept on milk diet with some sago. On May 6th he had complete paralysis of the right hand and forearm and of the biceps muscle. He could extend his forearm when he was told to do so and hold the arm out, though with a distinct wrist drop, but in order to raise the hand to the mouth he had to employ the other hand. There was right facial paralysis with inability to purse up the lips or to whistle. The tongue was protruded to the right of the mid-line. The movements of the right leg were perfect and the knee-jerks were normal. The right pupil was slightly dilated, irregular, and immobile; the left was small and reacted to light. The temperature was 100° and the pulse was 90 He was conscious, but drowsy, and had to be awakened to answer questions, dosing off between each question and lying in his cot in a position of general flexion. Hæmorrhage between the dura mater and the bone was diagnosed and I decided to trephine at once at the site of the injury. The head was shaved and thoroughly washed with antiseptic solution and dressed till the hour for operation with lint soaked in perchloride of mercury solution (1 in 1000). All preparations having been made and the instruments boiled he was put under chloroform by my assistant, Mr. Salvee. An incision 4 in. long was made in the line of the bullet wound and another crossing it at right angles. The four triangular flaps were turned back and the pericranium with them. At the point of impact of the bullet there was a small dark discolouration caused by the scrape of the lead bullet against the bone, but no fissured fracture or depression was found. The pin of the trephine was inserted over the discoloured part and a disc of bone removed. A fissure of the inner table was found crossing the disc in an upward and backward direction and attached to the disc of bone was a firm clot of venous blood as big as a hazel nut. It was evidently caused by venous oozing from the diploë. This clot impinged on the dura mater and compressed it and the subjacent brain, but beyond this the dura, mater was healthy, it did not bulge in the trephine hole, and pulsated normally. A careful exploration with an

aseptic grooved needle did not find blood below the dura mater, so the wound was washed out with warm perchloride solution and closed with silkworm gut sutures, which at the base hospital were kept permanently in 1 in 20 carbolic acid solution. Though this clot was found and removed, and though there was a distinct improvement of intelligence and some return of power to the biceps muscle on August 7th, I was anxious about the patient as I could not reconcile the production of so marked a brachial and facial monoplegia with a clot compressing the motor area for the lower limb, which was absolutely unaffected. I was therefore prepared to trephine again lower down on the first indication of compression persisting over the brachial and facial area. On August 8th the patient was conscious, answering questions slowly but sensibly. The paralyses were the same. The right pupil was more dilated and was still immobile. The pulse was 90 and the temperature was 100·8°. At 2 P.M. he suddenly became unconscious with stertorous breathing and a hot, sweating skin, and at 2.30 P.M. he had a spasmodic seizure of the right side of the face, both eyelids, and the right arm and forearm. The forearm was flexed and the wrist was flexed on the forearm, the thumb was forcibly pressed into the palm, and the fingers were clenched on it. Both eyes were twisted to the right and both pupils were widely dilated and immobile. This spasm lasted till 3 P.M., when the twitchings gradually ceased, the face being the first to recover. At 3.30 P.M. I again applied the trephine, having reopened and enlarged the old wound downwards. It was united by first intention. Two discs of bone were removed, one over the middle third of Rolando's line and the other on the same plane but in front of the line. The intervening bone between these two discs and the old one was removed by Hey's saw and bone forceps. It was then found that an angular piece of the inner table had been fractured, the angle pointing downwards and being almost directly over the fissure of Rolando. The sides, formed by fissured fractures, extended upwards on either side of the line over the ascending parietal and ascending frontal convolutions. From these fissures venous oozing had occurred resulting in a circumscribed clot of the size of a walnut lying over the middle third of the Rolandic fissure and the adjacent convolutions. There was no hæmorrhage below or wound of the dura mater, or evidence that the fracture of the inner table was sufficiently depressed to compress the brain. The clot was removed and the wound was closed as before. The course of the case after this was uneventful. The patient did not recover consciousness. He had no further spasmodic attacks but he gradually sank into a deeper and deeper state of coma and died on August 13th. I was exceedingly anxious to obtain a post-mortem examination, but Somali superstition was deaf to the voice of science, his comrades objected and my case was left incomplete.

Stationed 800 miles from civilisation and nearly as many thousand miles from a medical library I cannot now refer to the literature of this subject, but I believe that fracture of the inner table of the skull with no discernible injury to the outer is of sufficiently rare occurrence to warrant the publication of this case. That the splintering of the inner table did not radiate from the point of impact of the bullet is peculiar, but is not inconsistent with the theory of diffusion of force widely over the table not directly struck. I certainly expected to find a star-shaped fracture immediately beneath the point struck by the bullet, and this expectation led me to trephine there and not over the brachial area in the first instance. I do not think that by so doing the result would have been altered, as it is probable that severe laceration of the brain substance, if not a fracture of the base extending across the anterior fossa, was present. The occurrence of epistaxis would suggest the latter. Certainly the tremendous energy of a Martini-Henry bullet, striking the skull at five yards from the muzzle, would be sufficient to produce either lesion.

Unyoro, East Africa.

BARRY SCHOOL BOARD.—The triennial election of the Barry School Board took place on Nov. 18th, when nine members were elected. Of their number three were members of the medical profession—viz.: Mr. Peter J. O'Donnell, L.R.C.S. Irel., Mr. John L. Livingston, M.D., C.M. Glasg., and Mr. William Lloyd Edwards, L.R.C.P. Lond., M.R.C.S. Eng. The first-named of these gentlemen was returned at the head of the poll.

CURE OF LEFT CAROTID ANEURYSM BY MANIPULATION.

BY RICHARD SLOCOCK, B.A. OXON., M.R.C.S. ENG., L.R.C.P. LOND.,
HOUSE SURGEON TO THE ROYAL PORTSMOUTH HOSPITAL.

A MAN, aged twenty-eight years, healthy, of spare build, was admitted into the Royal Portsmouth Hospital, under the care of Dr. Lloyd Owen, on Sept. 14th, 1897, with a well-marked aneurysm of the left common carotid artery. He stated that a swelling, which gave him no inconvenience beyond a little neuralgia, had existed six weeks before admission. There was no history of injury or of syphilis. The pupils were symmetrical and normal. The swelling was situated near the bifurcation of the common carotid artery and was of about the size of a pigeon's egg, with most definite expansile pulsation both seen and felt. This ceased on compressing the artery below. Its walls were so thin that an immediate operation was indicated. The patient, who was a nervous and apprehensive man, reluctantly consented to an operation. It was decided to ligature the artery below the sac. The patient, however, suddenly took alarm and obstinately refused to have any surgical treatment. It seemed dangerous for him to even move under his present condition. He left the hospital on Sept. 18th and sudden rupture of the aneurysm was feared. No more was heard of him until February, 1898, five months afterwards, when Mr. Bond, of Havant, to whom I am indebted for the following notes, wrote "that a few days after his return from the hospital he examined him, and to illustrate the nature of the operation necessary for cure he pressed firmly over the sac and artery. When next seen, two days afterwards, the beating in the neck had ceased and never returned. The tumour gradually diminished." And writing in April Mr. Bond reports: "There is not the least vestige of the aneurysm. It is completely cured. ..... He is quite well and in regular employ."

Illustration showing aneurysm of carotid.

This case may, I think, be regarded as a cure of carotid aneurysm, effected in an unintentional and unexpected manner by manipulation, a method introduced by Sir William Fergusson in 1862. Probably, when the aneurysm was being examined a detached clot became impacted in the mouth of the sac and acted as a check to the circulation. Such a happy termination to such a serious case must be rare, and is therefore of sufficient interest to be recorded as a welcome accident and not as a mode of treatment to be followed. No one would, except by accident, employ such treatment in aneurysm at the root of the neck, for the fear of producing head symptoms from embolism of the cerebral arteries must be very great. Two cases are reported[1] in which the examination for diagnostic purposes of carotid aneurysm produced paralysis and death. This case confirms the observation[2] that carotid aneurysm is more common in men than in women (of 88 cases of this disease 55 were those of men and 28 those of women, the sex in 5 not

[1] Virchow's Archiv, Band xl.; Medical Times and Gazette, vol. i. 1859.
[2] Ashhurst's Surgery, vol. iii., p. 496.

being stated) and also that a very large proportion of cases of aneurysm of the carotids, 87·25 per cent., belongs to the common carotid at or near the bifurcation.

My thanks are due to Dr. Lloyd Owen for permission to publish the case and to my colleague, Mr. C. H. Newby, for the illustration.

Portsmouth.

INJECTION OF SALINE SOLUTION IN SHOCK.

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WHEN an animal is killed by bleeding all the blood does not escape, yet the animal dies. The quantity remaining in the tissues, although containing a large number of blood cells, is of no use because it ceases to circulate, a small stream being unable to travel by reason of the great inequality between its size and that of the large vessels. The heart has little or nothing to contract upon, and even if a little blood gets into the large arteries the vessels cannot pass it along. The more sudden the loss—i.e., the larger the divided vessels—the quicker the collapse and death; slow loss of blood allows time for transudation of fluid into the vessels from the tissues and thus enables the circulation to be quietly, though often very feebly, carried on. In surgical cases where large vessels are divided serious collapse may be produced, or even death. In the serious cases the pulse becomes imperceptible at the wrist, the skin ghastly pale, the lips and mucous membranes almost white, and failure of respiration heralds death. In such an alarming sequence promptitude on the part of the surgeon may avert a fatality. What he has to do is to quickly stop the leak (if possible) and provide the necessary blood or liquid.

Transfusion of arterial or venous blood necessitated a hero or heroine willing to part with the requisite amount and a cumbersome, complicated apparatus. These conditions were not often found together and even when they were only occasional good results were recorded, for the mortality was very high. Experimental research demonstrated that coagulation emboli were the cause of death. Blood from the lower animals always produced disintegration of the corpuscles, so its use was quickly abandoned. In 1862 Nussbaum[1] suggested defibrinated blood to diminish the risk of emboli, but its preparation in an emergency being somewhat tedious and necessitating several processes soon placed it out of court. Goltz recognised the salient fact that death from loss of blood was really due to loss of liquid from the vascular system, and that any suitable solution—e.g., saline solution or artificial serum—would do for injection. This was an important advance. It is only within recent years that the practical application of the truth has been realised and the lectures delivered by Dr. Wm. Hunter in 1889 at the Royal College of Surgeons of England[2] had a large share in emphasising it. He showed (1) that the immediate source of danger from sudden loss of blood is the rapid fall in blood pressure; (2) that the value possessed by transfused blood is almost solely physical and dependent upon its volume; and, lastly, that all the advantages of transfused blood can be more readily and safely obtained by the use of simple saline solution. Normal saline solution, 6 parts of sodium chloride to 1000 parts of sterilised water, promptly injected into the venous system, will wash up the stranded corpuscles and give the heart something to contract upon—liquid within—its normal stimulus, and enable the circulation to be carried on and the oxygenation of the red blood cells to proceed. If the patient be not too old, manufacture of new blood cells goes on rapidly and in a few hours the change produced is little short of marvellous, and anyone for the first time seeing a patient saved even when apparently at his last gasp will be astonished at the effect.

The emergency method of dissolving a teaspoonful of common salt in a pint of hot water gives about 1 in 875, but for all practical purposes it is near enough. When patients are only suffering some degree of collapse short of imminent peril the solution may be injected into the rectum. In the same way hot saline solution left in the peritoneal cavity during abdominal operations produces rapid improvement in the patients. The fluid may be injected by pressure into the cellular tissue, under the mammary gland, in the groin or in the axilla, and by becoming absorbed takes the place of the lost liquor sanguinis, but all these methods are only serviceable when circulation is proceeding and absorption possible, and are of necessity slower in their action than injection into the veins direct. In extremis, nothing short of salt solution directly into a vein is of any use. For this purpose the apparatus generally used by me consists of a glass syringe (capacity 4 oz.), 2 ft. of rubber tubing, and a curved metal canula to fit a vein of the size of the median basilic vein. The wad of the piston is made of sterilised gauze; the material generally found on the piston when it leaves the maker's hands consists of white, clean looking material in the superficial layers, but "abominations" underneath in the shape of common—very common—tow, a whited sepulchre in truth. The piston is withdrawn and the whole apparatus filled with salt solution before fitting the canula into the vein, to prevent, of course, entrance of air into the venous system. The canula is tied into the vein selected and the syringe is elevated; if the fluid does not run in quickly enough the piston is inserted and the solution is forced in. A finger-and-thumb clamp of the tubing at the nozzle of the syringe enables the syringe to be withdrawn, filled again, and reapplied, and so on until enough fluid has been forced in. I have used a Higginson's syringe as the motive power. The following three cases illustrate the value of resort to saline injection.

CASE 1.—On Oct. 5th, 1894, a man was brought to the Liverpool Royal Infirmary on a police ambulance with his "throat cut." The out-patient clinique was being conducted at the time, so no delay occurred, although half-an-hour must have elapsed since the incision had been made. The man was unconscious, deathly white in colour, and pulseless, even in the exposed cut common carotid. The lower jaw spasmodically dropped with a feeble inspiratory effort. There was a deep gash in the left side of the neck. The internal jugular vein was cut clean through, the cut ends being three-quarters of an inch apart; the common carotid was cut into and the external and anterior jugular veins were divided. There was no blood escaping from the cut vessels; he had lost all the blood which it was possible to lose. The cut vessels were clamped; a small jerk of blood—less than a teaspoonful—escaped, however, when the common carotid was clamped. He seemed to be as near death as it was possible to get. I exposed the left median basilic vein by an incision to which the patient did not object—being no doubt "too far gone"—and 20 oz. of normal saline solution were slowly injected. After 7 oz. he took a short, distinct, inspiration; at 10 oz. a deeper one; the carotid was noticed to pulsate at 15 oz. and his breathing became regular and deep; and at 18 oz. he opened his eyes but did not appear to be conscious. His radial pulse was distinctly felt. The injection was stopped, all the clamped vessels were tied and a dressing was hurriedly applied. Thus far the treatment had been carried out on the ambulance, elevated at the foot. He was then wheeled to bed, surrounded by hot water bottles, and the foot of the bed was raised 18 in. An hour later he had sufficiently recovered to answer when called loudly to. He rapidly improved in condition. On Nov. 5th, owing to secondary hæmorrhage, he became collapsed. A quart of hot saline solution was injected into his rectum; all of it was absorbed and acted most beneficially in reviving him. This patient died two and a quarter years later and the unique dissected specimen of the neck is in the museum of University College, Liverpool.

CASE 2.—A man, aged twenty-five years, had to lose his leg and part of his thigh on account of extensive suppurative (gummatous) disease of the knee-joint. The operation was perforce performed through diseased tissues by Mr. Hamilton on Oct. 13th, 1896. The flaps were loosely brought together. The stump appeared to be healing well when, on Nov. 2nd, the twentieth day, at 8 P.M., he suffered from severe secondary hæmorrhage. The ward sister promptly applied a tourniquet, but he had lost a large quantity of blood. The house surgeon, Dr. Graham Martin, on being summoned, realised the extreme gravity of the case. In the absence of Mr. Banks and Mr. Hamilton I hurried to the Infirmary. The patient was very much emaciated

[1] Medical Times and Gazette, vol. i., 1862, p. 600.

[2] Quoted by Erichsen: Science and Art of Surgery, tenth edition, vol. i., p. 411.

by his previous disease and collapsed from loss of blood. He was taken to the operating theatre, where a few whiffs of ether were administered. The flaps were torn open, when the oozing of blood appeared to be coming from the femoral vessels—arteries and veins. A ligature was rapidly passed around the group by means of a Macewen's hernia needle and tied. An incision was then made over the common femoral artery, when a mass of suppurating glands was found; these were roughly thrown out by finger dissection, and the artery exposed, which was barely pulsating. His condition was so desperate that I clamped the artery and at once injected saline solution into the median basilic vein with a Higginson's syringe through rubber tubing and a canula. He quickly improved, and when a pint and a half had been injected the artery pulsated vigorously. It was now tied in two places and cut between. Suitable dressings were applied. Next morning he was out of all danger, and he recovered rapidly. He would surely have succumbed on the table had he not been filled with salt and water—of that we all felt certain.

CASE 3.—On Oct. 7th of this year a strong, muscular young man, twenty-six years of age, was brought to the Infirmary with his right leg and part of the thigh mangled, the result of an accident received during railway shunting operations, a wagon having passed over his leg. The ambulance on which he had been carried bore evidence of the inefficiency of the three tourinquets which had been applied, there being at least a pint of blood on it. He was ghastly pale and his radial pulse was scarcely perceptible. A few whiffs of ether were administered and an amputation through the middle of the thigh was performed and the main vessels were tied. When the tourinquet was liberated the pulsation in the femoral vessels was so feeble and his general condition so critical that I injected saline solution into the internal saphena vein in the flap. I went on pumping until the main artery pulsated vigorously in the stump and the colour returned to his face. The flaps were rapidly sutured and a glass drainage-tube was inserted behind. That night his temperature rose to 100° F.; next morning it was normal, and he looked so well that no one seeing him would ever have guessed that he had suffered from amputation through the thigh so recently. On the second day he felt so well that he wanted to know "why he was not allowed meat and potatoes like the man in the next bed." His pulse was markedly dicrotic. The stump healed by first intention and on the twentieth day he was up and about the ward.

The ward sisters have noticed that patients perfused always appeared to have a good night after the operation and rarely complained of pain. The solution appeared to possess anodyne properties.

In other cases where local and general conditions were not so favourable temporary resuscitation took place. In one of these a thin, anæmic woman with a septic, discharging pyonephrosis, during an operation for extirpation of the kidney, collapsed on the table. The condition could hardly have been from loss of blood, for the kidney pedicle was securely clamped. I injected a little over a pint of saline solution into the median basilic vein with immediate effect in both restoring respiration and circulation. She, however, died on the third day. In another case—one of extensively-fractured skull—the man appeared to be dying on the table during an operation for tying both branches of the middle meningeal artery by Mr. Rushton Parker. Injection of 15 oz. of salt solution brought him around, but, alas, only to start fresh bleeding from a long rent in the superior longitudinal sinus—beyond repair. He succumbed. From observations extending over some years I am convinced that in saline flushing of the abdomen, injection into the rectum or into veins, we have a most valuable, probably the most valuable, means of dealing with collapse, whether due to loss of blood or not.

In cases which are not extreme, elevation of the foot of the patient's bed 12 in. or 18 in. and the injection of a quart or more of hot saline solution into the rectum by means of a Higginson's syringe, with a French catheter on the nozzle so that the fluid can readily enter the colon, acts in a few seconds like a charm; the fluid disappears like water on a blotting pad. It is of very little use in such patients to endeavour to stimulate the heart by ether or alcohol; what it needs most is a physiological stimulus from within its walls. I have resorted to this proceeding so often and with such gratifying results as to consider it my stock treatment for collapse.

I have not thought it necessary to give weary details of every case, my object in drawing attention to saline injections is merely to emphasise the simple and powerful means at our disposal. While conscious that much has been written on the subject, still I think saline injection is not sufficiently often resorted to by surgeons.

Liverpool.

A CASE OF EMPHYSEMA, A SEQUEL OF MALIGNANT DISEASE OF THE SIGMOID FLEXURE.

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EMPHYSEMA arising from a communication with the alimentary tract must, I think, be somewhat rare, and on that account I venture to put on record the following case, the patient in which was an insane inmate in the Bucks County Asylum.

The patient, a female, had been resident in the asylum for thirty-six years and at the time of her death she was sixty-six years of age. She was quite demented and unable to give any account of her symptoms. She enjoyed good bodily health and was well nourished, and until the onset of acute symptoms she showed no signs of disease. The first thing which called attention to her condition was that during the night she vomited and appeared to have pain in the epigastrium. On examination in the morning she looked pale and ill. The pulse was 96 per minute, weak, and thready; respiration was shallow and increased in frequency; and her temperature was 98·2° F. Extensive emphysema, indicated by characteristic crepitation, was found present over the whole of the left side and back, extending from the axilla and front of the chest to the left iliac region in the front of the abdomen. No fracture of ribs, which suggested itself as the most probable cause, could be ascertained, and there was no history of any violence. Some swelling was noticed in the right iliac region over the sigmoid flexure; this disappeared on manipulation and was considered to be due to gas in the large intestine. In the evening the patient's temperature was 100°. On the second day the emphysema was more extended and the swelling over the sigmoid flexure was more pronounced, although it could still be in great part reduced, returning almost at once. The bowels had not acted and an enema was given, the fluid being rejected forthwith. However, after the injection of 4 oz. of olive oil she had a loose motion on that day and on the following days fæces were passed in small quantity. Her pulse was 120 and her temperature 101°; the skin over the lower part of the chest and back was red and indurated, that over the swelling in the iliac region being natural. During the next four days her condition became gradually worse; the temperature ranged from 101° to 102°, the pulse varied between 120 and 140 and was very weak and thready, and the respiration was increased. She also vomited on one or two occasions, the vomited matter being dark in colour and slightly fæculent in odour. She died on the seventh day from the onset of acute symptoms. The treatment was simply directed to combat the tendency to collapse, and she was put on milk diet and given stimulants.

A post-mortem examination was made on the day after death. On opening the chest air was found present in the tissues of the chest wall, and at the lower and back parts of the chest there was diffuse suppuration which was more marked in passing downwards. In the left iliac region a cavity of some size was found, the contents being liquid fæcal matter and gas; and on the floor of this cavity a small opening was found to communicate with the intestine, admitting an ordinary probe easily. On opening the abdomen the sigmoid flexure was found firmly adherent to the abdominal wall over an area rather larger than a crown-piece, and the intestine at this point was found to be the seat of a new growth, firm in character, involving the whole circumference of the bowel, and causing such narrowing of its lumen that it would only admit the forefinger with difficulty. The surface of the tumour was ulcerated, and at the point of adhesion to the abdominal wall was a small opening leading to the cavity on the surface. The intestine above the flexure was much

dilated and contained a quantity of liquid fæces. The small intestine was also somewhat dilated, and the contents of the stomach were dark in appearance and slightly fæculent in smell. The other organs presented nothing noteworthy, except the heart, which was very fatty. The tumour on microscopical examination was found to be of the nature of a columnar-celled epithelioma.

The points of interest in the case appear to be the probably long duration of malignant disease with stricture of the bowel giving no urgent symptoms; the supervention of extensive emphysema from a communication between the tissues of the abdominal wall and the bowel; and the difficulty in forming a diagnosis of the condition and of being sure that it was not due to fractured ribs, certainty being only assured by the post-mortem examination. The immediate cause of the condition was probably the increased pressure of the intestinal contents arising from the stricture acting upon a part of the diseased bowel weakened by the process of ulceration.

Stone, Aylesbury.

TETANY AND TETANOID SPASMS ASSOCIATED WITH GASTRIC DILATATION TREATED SURGICALLY.[1]

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AN interesting paper by my colleague, Dr. Trevelyan, in THE LANCET of Sept. 24th, 1898, has attracted my attention to the importance of a symptom—tetany—which in the severe form described in his paper is manifestly a rare disease, but of which Case 1 in the present paper is a good example. It does not seem, however, to have been generally noticed that severe muscular spasms of a tetanoid character, possibly allied to if not really an early stage of true tetany, are frequently associated with gastric dilatation; yet it is a symptom which in a more or less severe degree frequently attends pyloric obstruction and which I have come to look on as a very frequent concomitant of the disease. A careful study of Dr. Trevelyan's paper leads one to the conclusion that fully-developed tetany, in association with stomach dilatation, is a symptom of extreme gravity and that in such cases a fatal termination is to be feared in a considerable percentage of cases. To quote from Dr. Trevelyan's paper: "If the term 'gastric tetany' is allowed to include the milder as well as the severer cases, and there is no sufficient reason against this view, then the disease may turn out to be more common than is usually supposed. The transition between gastric tetany strictly so-called, tetany with gastro-intestinal symptoms, and ordinary tetany would seem to be a gradual one. The prognosis of tetany occurring in gastric dilatation is undoubtedly very serious; nearly 75 per cent. of the cases die. The largest mortality occurs in the groups 2 and 3 [referred to in Dr. Trevelyan's paper], that is, where the spasm in the extremities is associated with tonic spasm in the head and trunk muscles or with clonic spasm. If the very strict views are held as to the disease then the outlook is almost hopeless; thus of the 11 cases recognised by Frankl Hochwart only 1 recovered. There is a danger here, as in some other diseases, that the fatal issue is raised to be the chief criterion as to the nature of the affection."

My own experience of tetany and of the severe muscular spasms in association with gastric dilatation leads me to think that we may possibly take a more hopeful view if the cases be treated surgically at an early period. I hope on some future occasion to report my experience in dilatation of the stomach treated surgically, as it has fallen to my lot out of nearly 60 operations which I have performed on the stomach to operate for this condition in nearly 30 patients, several of whom have had tetany or severe muscular spasms in a more or less pronounced degree. The following cases will serve to illustrate my remarks. In the first, the tetany was so pronounced that the question of strychnine poisoning crossed my mind. In the second and third cases, though there were well-marked tetanoid spasms, the cramps were limited to the extremities and the abdomen.

CASE 1.—A man was sent to me by his medical attendant in January, 1895, with a view to having something done in the Leeds Infirmary to relieve his condition. He had been suffering for five years from pain after the ingestion of food, with attacks of vomiting. Latterly his condition had become aggravated, the pains occurring from half an hour to one hour after each meal, being relieved only by vomiting, so that for the last six months he had had to give up his work as a printer. For some time before coming under my notice there had been very evident peristalsis from left to right in the epigastric region. Throughout the period over which his stomach symptoms extended his bowels had for the most part been very constipated, but there were occasional attacks of diarrhœa. During this time he had attacks of what he described as "cramps" in his limbs and especially in the legs. He had lost very considerably in weight, for in December, 1892 he weighed 9 st. 6 lb., whereas in January, 1895 his weight was only 7 st. 7½ lb. On examination there was found well-marked dilatation of the stomach, but the feature of the case which presents most interest in connexion with the present paper was the occurrence while under observation of severe tetanic spasms affecting almost all the muscles of the body. So extreme were these and so widespread (the muscles of the trunk and of the cervical region as well as those of the limbs being affected) that on Jan. 17th the question of possible poisoning from strychnine was raised. As palliative treatment of the stomach condition gave no relief he was submitted to pyloroplasty on Jan. 24th. The abdomen was opened and the diagnosis of cicatricial stenosis with hypertrophy of the pylorus was confirmed. The modified operation which I described some time ago[2] was done, a bone bobbin being employed. Recovery was uninterrupted, and although the cramps were present up to the time of operation he never had even a threatening of cramp afterwards. On Feb. 15th he was able to take a mutton chop for dinner without inconvenience, and by March 2nd (five weeks after operation) he had gained 8½ lb. Since then he has done very well. Two years after operation he had quite recovered his strength and was working as usual, his weight then being just over what it was in December, 1892, and quite 2 st. above his weight at the time of operation. There has been no recurrence of any "cramps" or of muscular spasms of any kind. In a letter received at the beginning of last month he speaks of some slight symptoms which may have had their origin in some stomach disorder, but he adds, "you will please understand that I am a new man to what I was when you saw me last."

CASE 2.—A man, aged twenty-four years, was seen by me on Oct. 5th, 1897, in consultation with his private medical attendant, on account of severe painful cramps of the extremities and of the abdomen with persistent vomiting. He gave the history of having had pain after food several years previously and of having vomited blood, since which time he had never been well and had gradually lost flesh. For some little time before I saw him he had vomited every day unless the stomach was washed out, and his weight from being over 10 st. had diminished to a little over 8 st. There was well-marked dilatation of the stomach but no pyloric tumour could be felt and simple stricture of the pylorus was diagnosed. He was admitted to the infirmary in October, 1897, and on the 21st of that month I performed pyloroplasty, as the pyloric orifice would only permit the passage of a No. 10 catheter. The transverse incision in the pylorus was sutured vertically over one of my bone bobbins. Recovery was uninterrupted, and from that time the cramps and vomiting ceased. He returned home within the month. On Oct. 23rd of this year I received from him the following letter: "It is with a grateful heart I write to thank you for the good received at your hands twelve months ago. I am thankful to say I have never had any trouble with my stomach since. I feel it my duty to acknowledge the good I received and also to thank you for your extreme kindness."

CASE 3.—A woman, aged twenty-nine years, was sent to me from the east coast in the spring of 1895, suffering from severe pain in the abdomen, associated with vomiting and loss of flesh; there was well-marked dilatation of the stomach, and the pain always started on the left of the abdomen and passed to the right, on which side, just below the ninth rib, there was well-marked tenderness with rigidity of the right rectus muscle. Operation was declined and I did not see the patient until

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on Nov. 4th, 1898.

[2] Brit. Med. Jour., July 20th, 1895.

nearly the end of the year, when she told me that the pain in the abdomen was excruciating and that it recurred every day; she said it was associated with severe cramp in the limbs, especially in the legs and thighs, and that at night she was kept awake by the pain. Vomiting of large quantities of fluid occurred daily and she was steadily losing weight and strength. Her symptoms begun in 1888 and she had lost 2 st. in weight between that year and 1895. On Dec. 14th, 1895, I opened the abdomen and found the pylorus adherent to the gall-bladder, liver, and abdominal walls, and it was so much thickened as to form a distinct tumour. Pyloroplasty was performed after the adhesions had been separated. Recovery was uneventful and satisfactory in every way and she returned home within the month. She never had any return of the tetanic symptoms, and a report sent to me in March was to the effect that she had gained flesh and was well. The further history of the patient is not germane to the present paper. It will therefore suffice to say that in July, 1896, I saw her again, when she complained of stomach symptoms, but there was not much loss of flesh. Later the vomiting, loss of flesh, and well-marked stomach splash showed that the pyloric trouble had recurred. I performed gastro-enterostomy a month ago as I found a distinct tumour of the pylorus, which I believed to be simple inflammatory induration and not malignant, otherwise I should have excised the pylorus. The patient has made a good recovery and has returned home. The interesting point in her case is that there has never been any return of the painful cramps in the limbs since the first operation.

Though tetany occurs apart from gastric dilatation—for instance in children during teething, when it is frequently associated with gastro-intestinal disorders and not infrequently merges into general convulsions, and in other conditions apart from stomach disorders—yet tetany or painful muscular spasms of a serious character are so frequently associated with that condition that one cannot ignore the association as being merely accidental. It is curious that I have never seen the symptom in other than dilatation due to simple causes, such as adhesions to the pylorus, gall-bladder or liver, or in stricture of the pylorus due to the cicatrisation of ulcers. I have never seen it in simple unobstructive dilatation or in dilatation due to cancer of the pylorus, though Dr. Trevelyan gives single examples of its association with both in his paper.

The immediate cause of tetany is perhaps beyond the scope of a surgical paper, but as my views are based on clinical experience they may be worth relating. I have noticed that the exacerbations of the tetanic state, especially in the first case related, were always associated with a painful contraction of the stomach, and that when the wave of contraction had reached the pylorus, which was previously incapable of being felt, it formed a distinct hard tumour. The abdominal pain then became very intense and the tetanic cramps in other muscles came on, or if already present became intensified. From this sequence of events I have come to the conclusion that the cause of the tetany is a double one—(1) the absorption of some poison from the dilated stomach which increases the excitability of the nervous system and (2) a reflex effect produced by the painful contraction of the pylorus. The practical outcome of my paper is that where tetany is, or its allied conditions are, associated with gastric dilatation surgical treatment is well worth considering before the symptoms become so severe as to lead to the almost hopeless condition described in the report of some of the fatal cases.

Leeds.

THE USE OF MORPHIA IN CARDIAC DISEASE.[1]

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BEFORE studying the clinical effect of morphia in diseases of the heart let us first consider what effect it has upon the heart and circulation in health. When a full dose of morphia is injected the first thing noted is some increase in the pulse-rate; this is effected partly through the cardiac centre and partly through the ganglia in the heart-substance. Then succeeds a period when the heart-beats diminish in frequency due to the stimulation of the vagus. If a sufficiently large dose be given this stimulation is succeeded by a period of depression or paralysis of the vagus which is shown by an increased frequency of the pulse due to the loss of balance between the inhibitory action of the vagus and the accelerator fibres. In the majority of cases, however, the intrinsic ganglia of the heart have ere this become paralysed themselves, so that they are unable to take advantage of the withdrawal of the inhibitory influence of the vagus, and so there is a persistence of the slow pulse, which gradually gets weaker and weaker until death ensues.

The action upon the vessels appears to be depressing from the first. The one period which physiologically suggests that morphia might be beneficially used in the treatment of cardiac disease is in the stage where the vagus is stimulated and the heart-beats are diminished in frequency. In the first instance I approached the subject entirely from the clinical side, and it was not until the treatment which had been begun in despair had proved of great benefit in several cases that I sought a physiological basis for that which is, I think, a clinical fact. Those books to which I have access universally agree in condemning the routine administration of morphia in cardiac disease, although most of them record the bald fact that it is occasionally useful. I have little to offer beyond the bare recital of the cases treated, but before considering these let me briefly glance at the action of the drug upon the kidneys, as it was here that I apprehended the greatest danger.

Of all the lessons which were hammered into me during my hospital career none was more persistently driven home than the fact that it is extremely dangerous to administer morphia in kidney disease or derangement; and as in an imperfectly working heart there is nearly always associated renal trouble, either in the shape of diminution in the amount of urine excreted or in the presence of albumin and diminution of the amount of urea and other excretives, so it may be imagined that I watched the quantity and quality of the urine passed by the patients under observation with much interest. Morphia can be detected in most of the secretions; a large proportion is excreted in the bile. It can also be found without much difficulty in the urine. The action of morphia is to diminish the amount of urine passed, to render probable the re-absorption of the drug from the dulled sensibility of the bladder, while in those cases where there is diminished excretory power of the kidney due to disease the danger of retention and accumulation of the drug on the system is sufficiently alarming.

I was first led to try the administration of the drug in those distressing cases of heart-disease (mainly of mitral incompetence) where the exhibition of digitalis and its allies, strophanthus and convallaria, appears to do nothing more than excite persistent vomiting and where the stomach retains practically nothing, where the heart is extremely irritable and irregular in rhythm and the pulse in volume, where often an ever-present dyspnœa renders the condition of the patient intolerable from exhaustion and from want of sleep, and where there may also be œdema from a failing circulation and a scanty amount of albuminous urine. In these cases I have seen the hypodermic injection of morphia effect the most gratifying results. The pulse has become steady, strong, and regular, the œdema has disappeared, the dyspnœa has been relieved, and the urine, instead of being scanty, high-coloured, of high specific gravity, and containing albumin, has become normal in amount and character and the albumin has become much less or has entirely disappeared.

CASE 1.—A man, aged fifty years, was seen by me in consultation in June, 1897; he had been confined to his bed for two months and had been unable to go to business for six months. He was suffering from urgent dyspnœa which had prevented his sleeping for many days. His legs were œdematous and his urine was scanty, loaded with urates, and it contained one-tenth albumin. His pulse was small, easily compressible, 120 to the minute, and irregular in time and volume. His heart was enlarged, the apex beat occurring in the sixth interspace 1 in. outside the nipple line. There was a distinct systolic murmur heard best over the aortic area. Every drug which had ever been suggested as of use in cardiac cases had been tried and had proved of no avail. I suggested hypodermic injections of ¼ gr. of tartrate of morphia and the effect was marked from the first. He slept quietly and comfortably, the heart gradually came down to 80 beats in the minute, the urine increased to 70 oz., the albumin cleared up, and the œdema disappeared. The

[1] A paper read before the West Kent Medico-Chirurgical Society on April 1st, 1898.

dyspnœa varied a good deal and was from the patient's point of view the most troublesome symptom, but he was now free from it except slight paroxysmal attacks when the effect of an injection was wearing off. He gradually improved in general health and two months after the commencement of the treatment was able to take short walks in the neighbourhood and to resume most of his former occupations.

CASE 2.—This patient was a man, aged thirty-two years, a labourer, formerly a soldier, who was admitted to the Lewisham Infirmary from the casual ward on Oct. 5th, 1896, complaining of dyspnœa and pain in the heart. On examination he was found to have his apex beat in the nipple line in the fifth interspace, and to have a reduplication of the first sound and a diastolic murmur well heard at the base and conducted down the sternum. The pulse-beat was of the typical water-hammer character. The urine was of specific gravity 1020, acid and clear, and contained no albumin and no sugar. There was a history of rheumatic fever seven years ago. Under rest and digitalis he recovered his usual state of health, but on Oct. 21st of the following year he had a severe attack of anginal pain and dyspnœa which, unlike some of his previous attacks, did not yield to liquor glonoini or to amyl nitrite. It, however, was relieved by a mixture of 10 minims of liquor morphiæ and 1½ minims of liquor atropiæ sulphatis every four hours. These anginal attacks now began to recur more frequently but were not very severe and were always relieved speedily by the morphia mixture and in the intervals he was able to get about and to assist in the duties of the ward. On Nov. 1st I find a note that the liver and spleen could be distinctly felt below the ribs. From this time he took to his bed and became progressively weaker and thinner. On Dec. 8th a severe anginal attack necessitated the injection of ¼ gr. of morphia which at once relieved him. Although he took a fair amount of nourishment his emaciation became extreme; an occasional injection when he had any return of the pain kept him absolutely comfortable and he died from sheer asthenia on Dec. 12th, 1897. In this case I claim that morphia succeeded in relieving the anginal attacks when everything else had failed; that it had no bad effect but on the contrary always left him better than it found him; that it rendered his last weeks comfortable and gave him an easy and painless departure instead of an agonising end, without in any way shortening his days.

CASE 3.—A man, aged fifty-one years, a labourer, was admitted to the Lewisham Infirmary on Jan. 6th, 1897, complaining of pain in the chest in the cardiac area off and on for nine months and of dyspnœa for over a year. On examination his apex beat was found to be 2½ in. below the nipple and just outside the nipple line; there was also a loud aortic systolic and diastolic murmur. Under rest, stimulants, and cardiac tonics, including digitalis and strychnine, he gradually grew worse; he could not sleep and he vomited incessantly, and his condition was considered absolutely hopeless. On Feb. 3rd 15 minims of liquor morphiæ were added to his mixture and from that time he steadily improved; the morphia required to be increased once or twice and an occasional hypodermic injection of the same drug was used in anginal attacks, but he steadily improved, contracted a fresh lease of life, and took his discharge on June 5th, 1897, with his heart thoroughly compensated and doing its work well.

CASE 4.—A woman, aged thirty-four years, was admitted to the Lewisham Infirmary on July 28th, 1897, complaining of shortness of breath and of great weakness. There was a history of rheumatic fever twenty-four years ago. She was suffering from urgent dyspnœa, constant distressing cough, and had œdema of both legs. The apex beat was in the seventh interspace just outside the nipple line. The pulse was very irregular in force and frequency, over 120, and could scarcely be counted. There were well-marked systolic and presystolic murmurs. There were râles and rhonchi all over the chest. The urine was of specific gravity 1024, acid, very dark, and scanty, was one-third albumin, and contained no blood and no sugar. Rest, digitalis, and stimulants did not afford any relief and on August 3rd persistent vomiting set in which the omission of the digitalis did not relieve. On August 12th 10 minims of liquor morphiæ were given every four hours. The effect was marked from the first; the vomiting ceased and the urine became more copious, increasing steadily from 10 oz. to from 60 oz. to 70 oz. in the twenty-four hours. The albumin gradually decreased, and on Sept. 11th it disappeared altogether. It was thought that this might have nothing to do with the morphia, so on several occasions the morphia was withheld, but this was invariably followed by a marked diminution in the quantity of urine and by an increase in the amount of albumin. I will not weary you by a recapitulation of a convalescence. A too early withholding of the morphia caused a relapse which at once cleared up on the renewal of the dose and after a prolonged and careful probationary course of exercise she took her discharge on March 19th with no symptoms and with her heart presumably compensated for a time but still acting irregularly and with the murmurs quite as distinct as before.

CASE 5.—A woman, aged twenty-four years, was admitted to the Lewisham Infirmary on Dec. 2nd, 1897, complaining of "pains in the heart." She was thin, anæmic, and slightly yellow. The apex beat was in the fifth interspace and gave no evidence of hypertrophy or dilatation. The action of the heart was irregular and quick and the pulse was easily compressible. There was a loud mitral systolic murmur heard. The first sound was suggestive of mitral obstruction. Rest and iron were prescribed. On the 22nd, there being no improvement, 5 minims of tincture of digitalis were ordered. A slight improvement followed, but on Feb. 10th her condition, which had been very carefully watched, became very alarming. The action of the heart became tumultuous, there was great cardiac pain, and a distinct presystolic murmur developed. 4 oz. of stimulant in the twenty-four hours were ordered. On the 12th the pulse was almost imperceptible and the patient was in a state of collapse and apparently dying. She was only passing 16 oz. of urine in the twenty-four hours and was vomiting incessantly. The digitalis was omitted. A hypodermic injection of ¼ gr. of morphia was given every twelve hours and the patient did what she had not done for many days—viz., she slept soundly. She immediately began to improve; the vomiting ceased, the urine became normal in amount, and the tumultuous action of the heart subsided. The presystolic murmur became less and less pronounced and the action of the heart more and more regular, until by March 17th the presystolic murmur had entirely disappeared and the heart's action was absolutely regular, although a well-marked mitral systolic murmur remained, and the patient was to all intents and purposes well.

I have chosen these 5 cases as being fairly good examples of the beneficial results of this method of treatment, although many more might be cited, and I may say here that I have had no accident. That morphia in large doses is a cardio-vascular depressant is well known, but its sedative and soothing effects upon irritable conditions of other organs are so well recognised that I am inclined to think that the undoubtedly beneficial results in cardiac disease are due to its action upon the nervous apparatus of the cardio-vascular system, both central and local, bringing rest to an overstrained organ and allowing it the chance of developing its recuperative power.

Lewisham, S.E.

A CASE OF

DEATH FROM DIABETES MELLITUS IN WHICH THAT DISEASE GAVE NO PREMONITORY SYMPTOMS.

BY T. WILSON PARRY, M.A., M.B. CANTAB.

A MESSAGE was brought to me at 8 o'clock on the morning of Nov. 9th that a woman living in a village some five miles from here had suddenly fallen down while in the act of dressing at 6 A.M. and could not "get her breath"; would I come at once? I started with the least possible delay and arriving at the house found that the patient, a woman sixty-eight years of age, had suddenly fallen, as my messenger had informed me, while dressing, without any previous warning of any kind and had been in a comatose state ever since. On examination I found the pupils to be contracted and only very slightly, if at all, reacting to light; the reflex was entirely abolished. All the limbs were flaccid and the knee-jerks were absent. I immediately put my stethoscope to the heart expecting to find an accentuated second sound (superficially diagnosing the case—from the suddenness of its onset, the age of the patient, and her previous apparently

good health—as an apoplectic seizure), but the heart sounds were normal in every respect. I was unable then to get a sample of her urine, as she had passed both urine and fæces under her and I had no catheter with me. As I had a couple of patients in that district to visit I returned to her in the course of about two hours and found her in precisely the same state as before. I could not make up my mind at all about its being an apoplectic attack and I was naturally anxious to examine the urine before giving the patient's friends a decided prognosis, and I fully explained to them the necessity of my so doing. Towards evening I called again and found her in the same completely comatose condition. I then drew off her urine. She died on the following morning at eight o'clock, her condition apparently having remained unchanged. The analysis of the urine gave the following results. It was acid in reaction; the specific gravity was 1023; a slight trace of albumin only was found, but a large quantity of grape-sugar was present, a few drops of urine only being necessary to reduce a large quantity of Fehling's standard solution. The amount of glucose present was 1·6 grammes per cent.

The points of interest in this case centre themselves as follows. The woman was, to all accounts, perfectly well up to the time she was seized with the coma; in fact, on Nov. 7th—that is, only two days before the attack came on—some one who was capable of judging had remarked how extremely well she looked and had told her this. She had not consulted a medical man for at least fourteen years. There was no history of anything which was not compatible with perfect health. There were not even any distinctive premonitory symptoms of diabetes mellitus, the disease she was undoubtedly suffering from. There was no emaciation—the general agreement was that she was getting stouter if anything; no undue thirst or hunger—she was very abstemious; no asthenia—she was strong and robust and worked hard; no polyuria—the woman who slept with her told me that she never got out of bed more than once in a night, if at all, to pass urine and that she had never complained to her of suffering either from extreme thirst or of passing more urine than she normally should. I have not the slightest doubt in my own mind that the coma in which this patient passed away was diabetic. The news brought to me, and which had evidently indelibly impressed itself on the mind of the messenger, that the woman could not "get her breath," bespoke the characteristic "air-hunger" which accompanies this coma, and the presence of a large quantity of glucose in the urine confirmed the diagnosis, in my mind, to an absolute certainty.

There is room for the suggestion that the coma was apoplectic and that the somewhat low specific gravity of the urine and the presence in it of some albumin, even although it was merely a trace, showed it to be renal in origin; but the condition of the heart, with its normal size, regular beat and rhythm, and sounds free from any murmur or accentuation—pulse without tension and arteries without atheroma—abolished from my mind entirely the apoplectic nature of the coma. Syphilis is practically unknown in this neighbourhood, and even if it were prevalent there were certainly no signs whatever to suggest that the patient was suffering from its tertiary effects. Epilepsy, too, has to be entirely abolished from the diagnosis as the coma was instant and was not preceded by any clonic or tonic spasms, nor was there any frothing from the mouth.

Summing up, then, this somewhat dramatic termination to an apparently absolutely healthy life—the suddenness of the onset of the attack suggestive of "stroke" but due in reality to hidden processes which must have been working in the dark for some definite appreciable time, the secret action of the disease culminating in a sudden attack and a short fatal illness of twenty-six hours—is to me a thing instructive in the highest possible degree. In the rush of general practice, when sometimes speedy examinations have to be made on account of quantity of work or lack of time, the practitioner is often tempted to neglect to examine the urine for sugar unless the patient exhibits symptoms suggestive of diabetes. Such a case as the present one has vividly brought to my mind the absolute essentiality there is of examining all urines for sugar, as well as for albumin, as there is the possibility that a person of apparently sound physical health may be suffering from a disease which may make itself manifest in an alarming way at any time but from the knowledge of which the patient himself may be happily entirely ignorant. It sometimes may be discreet to keep certain facts from a patient, but we should fail in doing our duty if we did not inform the relatives or friends of the patient of the possibly serious nature of an unsuspected disease. The legal aspect of such a case as this will at once present itself to the mind, hence again the vital importance of making it a habit to always examine the urine for sugar in every case taken in hand—an importance which to my mind cannot be overrated.

Youlgreave.

A CASE OF CEREBRAL TUMOUR:

RAPID ONSET OF CHARACTERISTIC SYMPTOMS; OPERATION; DEATH; REMARKS.

BY EDWARD ARMITAGE, M.R.C.S. ENG., L.R.C.P. LOND., D.P.H. CANTAB.,

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THE following case, bearing as it does upon the difficult question of the localisation of intra-cranial lesions, seems to me to be of interest, particularly so at a time when this subject is receiving so much attention and in view of the admirable address by Professor Augusto Murri of the University of Bologna, published in THE LANCET of Jan. 30th, 1897.

A male Hawaiian, aged about fifty years and residing in Wailuku, was admitted to the Malulaui Hospital on March 14th, 1895. He was brought to the hospital in a *nack* by his friends and was in an unconscious state on admission. Immediately after being carried into the male ward he was seized with an epileptiform convulsion. Being present at the time of his arrival I directed him to be laid on the floor of the ward until the convulsion had ceased, when he was placed on a bed and I at once proceeded to relieve the urgent symptoms. The patient was quite unconscious. His pupils were slightly dilated and, suspecting cerebral apoplexy, I bled from the left arm and applied a blister to the nape of his neck. This treatment was succeeded in a few minutes by the most encouraging results; he recovered consciousness, was able to speak and to recognise his relatives, as also an old friend who was a patient in the same ward. On inquiry from his relatives I learned that on the previous New Year's day he had fallen from the roof of his house; since which time he had suffered from headache until two days prior to his admission, when he had been seized with convulsions, unconsciousness, and vomiting of blood. Later I learned that he was in this state at least four days prior to admission, and I have no doubt that a "kahuna" or native soothsayer, had been consulted. On interrogating the patient, he told me that the headache affected the whole vertex but was particularly severe over the forehead. The patient was a strong-looking, well-developed man, profusely tattooed. On the right frontal region at the upper margin of the forehead and above the centre of the orbit was an old scar the posterior portion of which presented a fungoid granulation. His pulse was strong, regular, normal, and of high tension, and his temperature was 102° F. in the axilla. During the convulsion there was tremor of the lower limbs and his whole body was violently agitated by the powerful clonic contractions of his left arm which was strongly flexed, the fist being clenched. The head was turned to the left side, as were also the eyes; the mouth worked spasmodically, the teeth being gnashed together and the left corner of the mouth being drawn upwards. After he was restored to consciousness I directed his head to be shaved, cold to be applied to the vertex, a five-grain dose of calomel to be administered, and the patient to be kept as quiet as possible. Towards evening the convulsions recurred and the patient again lost consciousness. I consequently decided to operate, expecting to find an abscess beneath the site of the former injury.

At 9 A.M. on March 15th, the scalp having been shaved and washed with antiseptic solution of carbolic acid, I administered a hypodermic injection of half a grain of morphine, and my friend Dr. Moroura anæsthetised the patient with chloroform, which was well taken. Raising the scalp by a horseshoe flap, including the cicatrix, I found the scalp tissues and the pericranium strongly adherent to the

bone by fibrous bands beneath the old scar. Exposing the bone with the raspatory, a crown was removed by means of the trephine and elevator. The dura mater bulged somewhat into the aperture, but was not congested. On incising the dura mater and raising a flap the brain was found to be of normal appearance. I punctured it first with the needle of a hypodermic syringe and then several times with an aspirating needle, using the greatest care to pass the needle gently and perpendicularly to the brain surface. No collection of pus having been found the wound was washed with a solution of corrosive sublimate 1 in 2000, closed (drainage being allowed for by threads of catgut projecting from the posterior angle), and dressed with iodoform and boric acid lint. The crown of bone which had been placed in a warm solution of corrosive sublimate was not replaced, the signs of intra-cranial tension being so marked. During the course of the operation, whilst the patient was not fully under the influence of the anæsthetic, the convulsion recurred four times with great violence, retarding proceedings considerably; but when fully under the anæsthetic he lay quite quietly, breathing heavily. Each convulsion was preceded by a distinct aura, during which the respiration became shallow, the eyes were fixed, and the patient appeared to be gathering himself together prior to the approaching nerve-storm. During one of these attacks the tongue was severely bitten, a portion 2 in. in length of the left side of the tongue being almost severed; this I sutured and I kept the teeth apart with a gag.

Consciousness did not return after the operation and the patient was put to bed. The convulsions appeared to be of shorter duration; they came on with great regularity as before, at intervals of from fifteen to twenty minutes and lasting for about half a minute, the patient being perfectly unconscious during the intervals. After the administration of the chloroform the pupils were contracted. A large rectal injection of oil, soap, and water was ordered, which brought away considerable fæcal matter, after which two drachms of bromide of potassium dissolved in 4 oz. of water were injected per rectum and retained. The patient never recovered consciousness, and died the same night about 10 P.M.

On the following day I performed a necropsy. On removing the cranium the veins of the dura mater were found to be somewhat congested. The dura mater was easily removed from the subjacent membranes except at one point where the membranes were adherent and thickened over a surface of 1½ in. in length by ⅝ in. in width. This surface overlay the bases of the superior and middle frontal convolutions of the right cerebral hemisphere. The inferior frontal convolution on the same side was not involved. The above surface marked out the limits of a tumour about ¼ in. in thickness and apparently taking origin from the dura mater. On further examination of the brain substance there was no sign of meningitis, accumulation of pus, or hæmorrhage. The punctures into the brain substance made at the time of operation had entered the right middle frontal convolution.

The remarkable points about the above case are four. 1. The rapid onset of acute symptoms when a period of more than two months had elapsed since the injury. 2. The marked relief to intra-cranial tension which followed on bleeding from the arm. 3. The difficulty of making an exact diagnosis of the intra-cranial lesion, all the symptoms before operation appearing to indicate abscess. 4. The difficulty of localising the lesion by means of the characters of the convulsion, the motor disturbance indicating irritation of the ascending frontal and parietal convolutions rather than of the bases of the middle and superior frontal convolutions.

Wailuku, Maui, Hawaiian Islands.

UNIVERSITY COLLEGE, BRISTOL.—The annual meeting of the governors of University College, Bristol, was held on Nov. 16th, under the presidency of Mr. Lewis Fry, M.P. The report stated that the total number of students in attendance had been 525, of whom 90 had entered the courses of the Faculty of Medicine. Mr. Albert Fry, in moving the adoption of the report, stated that the College urgently required more funds. Mr. Bryant, F.R.C.S., in supporting the resolution, regretted the indebtedness of the College and added that he hoped that in time a university would be established in Bristol which would become an educational centre for that part of England. The resolution was carried unanimously.

VESICO-VAGINAL SEPTUM TORN DURING LABOUR; SLOUGHING VAGINITIS; SUBSEQUENT CLOSURE OF THE VULVA.

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INDIRECT operative treatment of vesico-vaginal fistula may be carried out in two ways—by closure of the vagina or of the vulva. Of these the former is to be preferred whenever possible, but in the following case this would have been useless because of the partial destruction of the urethra and neck of the bladder. Closure of the vulva or episiorrhaphy was done by Vidal de Cassis, who freshened the labia majora; and Fritsch suggested that the freshening in these cases should be done by a process of flap-splitting, but I am not aware that there is any account of a similar procedure to that carried out in this case previously on record as having been carried into practice.

A young woman, aged eighteen years, was admitted to the Wolverhampton and South Staffordshire General Hospital on May 19th, 1892, having been ill since her confinement nine days previously. The labour only lasted six hours. The child was large, was born dead, and there appeared to the mother of the patient to be nothing unusual until after the labour was finished, when the urine dribbled away. The patient was attended by a midwife and only knew that she had had a good deal of headache and smarting in the front passage. On the seventh day Mr. A. Hands was called in for the first time, and on his recommendation the patient was sent into hospital. On admission the girl was found to be acutely ill, very weak and pale, but well nourished. There were slight dyspnœa and frequent loose cough with pale, frothy sputum. The tongue was dry and the breath had a strong, offensively sweet odour. The temperature was 102·2° F. and the pulse was 130 and feeble. A hurried examination showed no abnormal signs in the heart or lungs; the abdomen was prominent, but no tenderness or localised swelling or resistance could be made out. The perineum was split back to the edge of the sphincter and the whole vulvar region was much swollen, brawny, and red, the raw surface being covered with a putrid, stinking, whitish slough or false membrane; the urine constantly dribbled over the raw surface. On the following day the condition, local and general, remained the same and in the afternoon chloroform was administered and a careful examination made, the vagina being first flushed out with a gallon of very hot water. The floor of the urethra was wanting, the bladder and vagina forming one large cavity, at the upper end of which posteriorly was felt what was taken to be the partly closed cervix, on the right of which was another cavity into which the vaginal tube readily passed. The whole of the walls of this large irregular cavity were swollen, hard, brawny, and as much as could be seen was covered with the dirty white sloughy material above mentioned. The rectum was intact. The uterus could not be distinguished, and at any rate did not extend above the pubes. The interior of the cavity was scraped with a sharp spoon, glycerine with carbolic acid was swabbed over the surface, and a plug of gauze was introduced. The patient remained in a very critical condition for a week after this attempt at cleansing, the temperature ranging from 100·6° to 103·6°, and the pulse from 120 to 140, but she took four pints of milk and two eggs daily, and brandy freely, 16 oz. in the twenty-four hours for five days. For the following fortnight she continued steadily but slowly to improve and by June 9th the sloughs were all away, and the temperature had become normal in the mornings, but still rose to about 100° in the evenings; all the urine still dribbled away, and the exact local condition could not yet be made out. From June 22nd to 29th, without any apparent cause, the patient again became more febrile, the temperature varying from 100° to 102°, and the general condition being less satisfactory, but nothing locally could be discovered except some tenderness in the region of the right iliac crest. From the 29th the temperature remained

normal and on July 11th the girl was transferred from the infectious block to the general ward, having been up and about for a week and seeming strong and well. There was little, if any, vaginal discharge, but no control over the urine. On the 19th, under ether, the vagina was found to be considerably contracted and its walls were hard and resistant; the urethral floor had disappeared and its upper wall was adherent to the pubes and formed the upper boundary of the urethro-vaginal orifice. The wall of the rectum and the external sphincter were intact. The base of the bladder had almost entirely disappeared; in the hard roof of the irregular vesico-vaginal cavity an offset which admitted the index finger went upwards and to the right behind the pubes. The vagina admitted the forefinger for 2 in., and at the further extremity there were two offsets, one, the orifice of which felt like a dimple, into which a sound passed easily, going upwards and backwards for 1½ in.; and to the left of this a larger but shallower offset. No trace of the cervix uteri could be felt, and neither by vaginal nor rectal examination could anything be found resembling the uterus distinct from the hard walls of the irregular cavity just described. On August 8th, under ether, an attempt was made to close the orifice of the vagina while re-forming the urethra. A V-shaped incision was made with scissors round the orifice about ¾ in. deep except anteriorly, where a short longitudinal incision was made on either side; these short incisions enabled the urethra to be re-formed and the margins were united with silkworm gut sutures. The flap made by the V-shaped incision was then turned inwards, but with great difficulty, on account of the dense cicatricial resistance, and united with two strong wire sutures. On August 11th, three days later, a note was made that the urine still mostly dribbled, but 10 oz. had been passed on one occasion. On the 16th the urine was being passed in quantities of about 6 oz., and in the previous two days was only passed involuntarily on one occasion. One wire suture was removed on the 26th and the patient was allowed to get up on the 30th. On Sept. 3rd the last suture was removed and the parts had all healed satisfactorily, the vagina being completely closed, and a urethra of somewhat above the normal size having been formed. The patient could retain her urine for two hours or so when standing or walking, but if she went longer there was still occasional dribbling, though not to a great extent. On August 29th and 30th, and again from Sept. 29th to Oct. 2nd, the urine was discoloured with menstrual discharge. On Oct. 7th the patient was sent home and she was again seen in the out-patient room on Nov. 18th, well, and with complete control over the bladder.

Mr. Arthur Hands very kindly visited this patient for me in April, 1894, and finding that she had been married at the preceding Christmas he was good enough at my request to send her to see me. On April 24th she appeared well and healthy; she had returned to her work one month after leaving hospital and had continued till the last three weeks, when she left at her husband's request. The periods have appeared regularly every month, lasting three days or so; they are painless; the fluid passes in the urine, which becomes a little red. There are no clots. The patient would not know she was "poorly" if she did not examine her urine. The urine can be retained for three or four hours in the daytime and seven or eight hours at night; it is never passed involuntarily even in sleep. Since her marriage there has been no pain or difficulty in connexion and the sexual feeling is the same in all respects as before her child was born. There is now a thick, soft, fleshy perineum; the index finger passes easily along the canal which was intended for a urethra into a *cul-de-sac* lined with soft mucous membrane, partly divided into two by a septum, in front and above which, between it and the pubes, the examining finger passes into the freely communicating bladder; this anterior part is very tender to examination. Nothing that feels like a sphincter to the bladder can be made out. No opening can be felt in the wall of the posterior part of the *cul-de-sac*. Bimanually the fingers meet behind the pubes and at the sides and nothing definite can be made out. Per rectum, through the anterior wall is felt a firm, tightly fixed body, rounded from side to side with the convexity backwards, extending from immediately above the sphincter ani internus upwards for about 3 in.; nothing further can be made out by bimanual examination with the finger in the rectum.

What happened at the delivery of this girl will never be exactly known, the only certain facts being that there was a dead child born after a short first labour, that there was complete incontinence of urine from the time the labour was finished, and that on the seventh day the patient was in a gravely septicæmic condition with sloughing vaginitis, the result of urine flowing freely over the raw torn surfaces of the parturient canal. Her recovery from the grave condition she was in when admitted to the hospital is a striking instance of the value of alcohol in treating septicæmic conditions. Sixteen ounces of brandy daily for five days is a large dose for a girl of eighteen years; still, not only did this produce no sign of alcoholism, but it enabled her to take and digest a sufficient quantity of milk and eggs to satisfy our minds that it was acting as a tonic as well as a stimulant. The condition of the parts locally was such as to preclude a thorough cleansing of the surfaces, and we had to be contented with a partial cleansing, followed by repeated douchings.

After the recovery of the girl the injury was found to be too extensive to hope to restore the bladder, and as the urethral floor was also wanting some method had to be devised by which, if possible, a new sphincter could be provided. There seemed to be no way of testing the natural condition, nor did it appear to be worth while troubling too much about this since it was not clear whether any—or, if any, how much—of the uterus was left. The best way appeared on consideration to be that which was carried out with complete and permanent success—to split flaps by a V-shaped incision round the vulvar orifice, extending forwards as far as the level of the urethral floor, with two incisions at this level at right angles to the rest of the incision; by then bringing the raw surfaces together it was hoped to restore the muscular wall of the urethra at least sufficiently to get some power of retaining urine. The measure of success obtained was most gratifying. After the vulva was thus closed the uterus, as has often happened after colpocleisis for extensive vesico-vaginal fistula, gave evidence of its being still present by menstruation recommencing and continuing regularly. Since leaving the hospital the patient's general health has continued perfect and her marriage appears to have afforded complete satisfaction to herself and her husband, the repaired urethra having added to its functions without difficulty and with perfect success. The total absence of any irritation of the lining membrane of the bladder, or rather the new urine reservoir, and of any phosphatic deposit or subjective discomfort are notable facts, as also is the comfort with which the menstrual function is carried on under the new conditions. *A priori* some troublesome symptoms relating to these functions might be expected, and as a matter of experience in some of the cases in which the vagina has been thrown into the bladder vesical catarrh, metritis, pyelonephritis, or phosphatic calculi have been observed, but in the majority of subjects, as in the present instance, the different functions are continued in comfort.

Birmingham.

A Mirror
OF
HOSPITAL PRACTICE.
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON LOCK HOSPITAL.

A CASE OF ACUTE PEMPHIGUS; RECOVERY.

(Under the care of Mr. BUXTON SHILLITOE.)

IT is very probable that several distinct forms of bullous disease of the skin are classed together under the name of pemphigus. It is at all events certain that in a large number of cases of bullous dermatitis a very definite micro-organism has been repeatedly found, while it is apparently not discoverable in all. When constitutional symptoms appear they are probably to be attributed to the absorption of toxins from a secondary streptococcic infection of the serum of the bullæ. We are not told in the record of the

case below in what doses the arsenic was administered, and therefore it is difficult to be sure that this was an instance of pemphigus in which arsenic failed. The diagnosis of a bullous syphilide from pemphigus is sometimes very difficult, but on the whole a true pemphigus is more liable to be mistaken for a syphilide than for the reverse error to occur. For the notes of the case we are indebted to Mr. C. F. Marshall, resident medical officer.

The following case was sent to the Lock Hospital as there was a suspicion of its being syphilitic in origin. The patient, a girl aged nineteen years, had no other signs of syphilis and the progress of the case without any specific treatment shows that it was not a bullous syphilide. The rash appeared on Jan. 1st in the form of clear blebs on a slightly reddened base, first on the hips and arms; afterwards it spread over the whole of the lower limbs, the greater part of the back, neck, forearms, and slightly on the chest and chin. The front of the abdomen, the palms of the hands, the soles of the feet, and the mucous membrane of the mouth were free. The bullæ varied in size from that of a pea to that of a walnut; they contained clear fluid at first but in a few days this became purulent and in some cases slightly hæmorrhagic. They soon coalesced when close together, forming large areas of sodden epithelium with sero-purulent discharge, but at no time were there any constitutional symptoms. The progress of the case is briefly as follows. By the 25th most of the bullæ had burst and coalesced; a few fresh ones were appearing from day to day; some were clear and others were purulent from the first when appearing on parts already affected. By Feb. 2nd the bullæ were nearly all healed, leaving a brownish-red staining of the skin. Some fresh pustules had appeared on the inner side of the thighs. The stains were mostly confluent on the back and limbs and were discrete on the neck. On the 24th the patient was sent away to the country. Only a few small blebs had appeared from time to time. Her general health was good. On March 11th there was a recurrence of fresh bullæ and pustules on the thighs, arms, and chin. These increased on the lower limbs till the condition was nearly as bad as at first. By the 23rd the skin was quite clear again except for fresh staining. On the 29th some fresh pustules appeared on the thighs, forearms, and face. On April 6th she was sent to the seaside, but a few days later, the 10th, she had another relapse. Clear bullæ appeared as at first, involving the whole of both upper and lower limbs, and slightly affecting the shoulders and chin. By May 2nd the skin was quite clear again and the general health was much improved. On the 15th a few small pustules appeared about the wrists and ankles. The stains of the old rash were fading. By June 1st she was well and no subsequent relapse has occurred. With regard to treatment arsenic was given internally nearly all through the illness, but it did not seem to have much effect. Locally the most satisfactory result was obtained from iodine baths (about 1 in 5000), which were given daily while the eruption was active. During the last severe relapse (April 10th) the local treatment consisted of liquor carbonis detergens, which acted equally well.

Bacteriological examination.—This was carried out by Dr. Bulloch at the British Institute of Preventive Medicine and we are indebted to him for the following notes:—Examination of fluid from the clear bullæ showed the presence of a diplococcus agreeing in almost every particular with the diplococcus first found by Demme in cases of pemphigus, and also found by Dr. Bulloch in other cases of acute pemphigus. Fluid from the bullæ which marked the relapse of April 10th was also examined, but the diplococcus was not present in this, only streptococci and staphylococci.

Remarks by Mr. BUXTON SHILLITOE.—This case is remarkable chiefly on account of recovery after such a severe attack of pemphigus and also for the total absence of constitutional symptoms. It is also of interest that a diplococcus was found by Dr. Bulloch agreeing with that found by Demme in similar cases. A further point is the fact that a month before the appearance of the rash superficial whitlows formed on several of the fingers. This is of interest in that Mr. George Pernet[1] collected several cases of pemphigus in butchers all of which were preceded by whitlows, suggesting the possibility of the poison being contained in the meat. In the present case there was no distinct history of contamination from meat except that the patient frequently did cooking. With regard to treatment I should like to draw attention to the benefit derived from local antiseptic treatment of the skin both by iodine and by liquor carbonis detergens, and to the apparent failure of arsenic to modify the course of the disease. I am much indebted to Dr. Bulloch for making the bacteriological examination and also to Dr. Roberts of the Folkestone Hospital for notes of the case during the relapse.

[1] British Journal of Dermatology, 1896.

LIVERPOOL ROYAL INFIRMARY.

TWO CASES OF OMENTAL UMBILICAL HERNIA ATTENDED BY SLOUGHING.

(Under the care of Mr. RUSHTON PARKER.)

SLOUGHING of the skin over an umbilical hernia is a rare occurrence and even for that reason Mr. Rushton Parker's two cases deserve to be recorded, but there are other points of interest about them. In the first case the ulcer left after the separation of the slough healed rapidly with very little treatment. In the second the connexion between the interference with the circulation in the hernia and the two confinements is interesting, though easily explicable by the increased abdominal pressure. Mr. Parker's explanation of the manner in which the sloughing was brought about appears to be extremely probable.

CASE 1.—A woman, aged thirty-nine years, was admitted into the Liverpool Royal Infirmary on July 5th, 1880, having an umbilical hernia which was 2 or 3 inches in diameter and over which a small piece of skin had sloughed. After separation there was exposed œdematous and juicy connective tissue of a pale greenish colour, suggesting bile-staining. An offer of herniotomy was made to the patient for the purpose of curing the rupture, but this she declined. The exposed tissues healed without difficulty or complication under some antiseptic dressing. The rupture had given her no inconvenience until the slough appeared, and when the aperture closed over her purpose was served and she left the hospital after a few weeks. The contents of the sac were apparently omentum, but were never seen.

CASE 2.—A woman, aged forty-two years, was sent to Mr. Rushton Parker's ward at the Liverpool Royal Infirmary on the night of May 1st, 1891, by Dr. Henry Briggs, who informed Mr. Parker that he had found her in a feverish condition with an umbilical hernia in a state of acute inflammation, with sloughing of the skin over the sac, which evidently required operative treatment without delay. Mr. Parker therefore went up to the ward about midnight and learnt that the hernia was an old one; that the patient had been confined eighteen months previously, after which the hernia had become discoloured and had remained so; that three weeks before admission she had also been confined; and that the hernia had become acutely inflamed. An operation was performed at once under chloroform, the hernia being of about the size of a man's fist, surrounded by an acutely inflamed area and having a black skin slough in its centre somewhat larger than a crown piece. The sac was laid open and was found to contain extremely fœtid pus and gangrenous omentum. The skin slough was cut away and the interior was well washed with a 1 in 1000 solution of perchloride of mercury. The neck of the sac appearing to be free from contamination the omentum was pulled out and transfixed with two large pins, behind which it was tightly tied with a piece of strong bandage soaked in the sublimate solution of the strength above mentioned. All the gangrenous portion was cut away and with it the anterior portion of the sac, which was also gangrenous. The wound was left open and filled with iodoform gauze. Some more sloughs separated in the course of about ten days and healing was gradually accomplished without local incident or complication by the last day of June, two months after admission, the site of the former hernia being well depressed. The temperature at the time of the operation was over 102° F., but fell during the early morning to normal and remained so for three weeks except for a rise of a single degree on the fourth day. Then the temperature rose to 100° but fell to normal for a day and a half, then rising again to 100°. In the middle of the fourth week there was an evening rise to nearly 105°, but the temperature fell a degree each evening and at the end of the fourth week the normal was again reached and so remained during the fifth week. The temperature in the morning was 3° or 4° lower than in the evening during this rise. The sixth week commenced with

another evening rise to 105° and the fever continued for three days, the temperature being 1° lower each evening and being about 100° each morning. After a day's remission the temperature rose to 103° and 102° for three more days and finally dropped. No certain explanation of these feverish attacks was ascertained. The pulse was 120 and bounding, the tongue was dry but not coated, and there was thirst. But the contracting and healing wound showed neither suppuration nor retention; nor was there any abdominal tenderness. The fever may have been due to constipation which was relieved by glycerine enemata.

Remarks by Mr. RUSHTON PARKER.—In Case 1 I was puzzled at the time to account for the sloughing, and apparently had an idea then that there must have been a small fæcal fistula. The case is merely catalogued and the following words are appended: "Sloughing skin and fæcal fistula." But I cannot now remember whether this fistula was an observed fact or only, as I rather suppose, a mere inference from the biliary staining beneath the slough. In any case the wound healed very simply. The question arises, How did the sloughing and inflammation start in Case 2? I am inclined to attribute it to, first of all, sloughing of the skin from stretching, probably during the efforts of parturition. Then followed infection of the adjacent parts, of the sac, and eventually of the contained omentum. The bacterial invasion must have come either from the intestine or from the skin. There is no evidence that it came from the intestine, which never came into the case at all, much less gave any suggestion of a fæcal fistula. It can easily be accounted for by the pressure and stretching of the skin of the over-distended sac on the over-distended abdomen at the end of pregnancy. The occurrence of this case seemed thus explained at the time. Moreover, it appeared to me also to throw light on the previous case, which I am inclined to regard as a milder form of the same accident.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Hip-joint Disease.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 22nd, the President, Mr. BRYANT, being in the chair.

Mr. EDMUND OWEN read a paper on a Distinct Variety of Hip-joint Disease in Children and Young Persons. He drew attention to a very important group of cases of acute suppurative disease of the hip-joint which must be carefully separated from the much more common tuberculous disease of this joint. The disease was caused by the invasion by the micro-organisms of osteomyelitis of the very active tissue at the upper extremity of the diaphysis of the femur. Reference was made to the fact that the hip-joint differed from all other joints in that the end of a diaphysis entered into its formation, and that, therefore, when this diaphysis was the seat of osteomyelitis suppurative arthritis almost inevitably resulted. The symptoms of this form of disease were especially characterised by sudden onset, acute course, and intense severity. There was often a history of injury or some lowering disease preceding the onset of the attack, and it was suggested that such conditions, by lowering the vitality of the growing tissue, render it more vulnerable to infective organisms. Death from septicæmia was liable to occur if the disease was not speedily recognised and adequately treated. The treatment advocated was the free opening of the joint, with removal of the epiphysis and the affected part of the diaphysis, and the thorough application of germicides to the interior of the joint, and this operation must be followed by drainage. In view of the urgency of these cases Mr. Owen laid stress on the extreme importance of early correct diagnosis and immediate efficient treatment. He concluded with the report of four illustrative cases under his care. Reference was made to a paper on this disease by the late Dr. J. S. Bristowe, published in the Transactions of the Pathological Society for 1862.

Mr. A. E. BARKER called attention to the fact that the paper described a condition which was well recognised and emphasised the very important point that in osteomyelitis affecting the hip-joint active measures must be promptly resorted to and carried out. The treatment which in acute tuberculous disease of the hip-joint he had advocated some years ago, and which he now was glad to see Mr. Owen fully endorsed—viz., the clearing out of the joint and closing of the wound—would in the cases described by Mr. Owen lead to disastrous results. He referred to one class of case in which such a procedure was advisable and had been successfully carried out by himself—viz., in the case of gonorrhœal infection of the hip-joint. He did not agree with Mr. Owen that strong germicidal solutions were necessary for washing out the joint, but considered that thorough washing with an indifferent fluid was most effectual and did not give rise to the destruction of tissue which arose from the use of strong mercurial solutions.

Mr. W. G. SPENCER drew attention to the fact that the disease as described by Mr. Owen as septic disease of the upper end of the diaphysis of the femur was the same as epiphysitis and acute periostitis of the upper end of the shaft. The fact that the diaphysis entered into the formation of the hip-joint did not, he considered, make so essential a difference in the affection of this joint as Mr. Owen in his paper seemed to infer, for in 3 cases under his care in which the disease was situated in the diaphysis the joint contained pus; in the first of these the upper end of the humerus was affected, in the second the lower end of the femur, and in the third the upper end of the femur. He could not agree with Mr. Owen's radical procedure of removing the head of the femur, but thought that the more conservative process of washing out the joint and drilling into the diaphysis was often attended with good issue, and in this manner the results of thrombosis of the Haversian canals migh tbe relieved, and the head of the femur be preserved. He was always in such cases accustomed to use a strong germicide solution, and he preferred carbolic lotion to perchloride of mercury owing to its less poisonous character.

Mr. WARRINGTON HAWARD said that the special treatment advocated in Mr. Owen's paper was necessary in this acute form of hip disease in order to save the life of the patient; a treatment less radical did not remove the seat of the disease, and therefore it was essential to remove the head of the femur and the diaphysis. The treatment of simply washing out the joint did not remove the original seat of the disease and jeopardised the life of the patient.

Mr. F. C. WALLIS reminded the society that he had shown a case of somewhat similar nature at the Clinical Society, a child, two years of age, in whom after an accident an abdominal swelling appeared associated with pain in the leg. On opening the abscess in the abdomen three-quarters of a pint of pus were evacuated and the head of the femur was found loose in the abscess cavity. The child made a good recovery.

Mr. GOLDING-BIRD differed from Mr. Owen with regard to the removal of the head of the bone. He did not himself think it necessary in all cases which were of a fulminating nature and the following case which had come under his care proved that recovery might take place without such a procedure. A boy, aged eight and a half years, fell on his hip. The next day he limped and on the following day he was so ill that he was brought to the hospital, the diagnosis then made being acute septic inflammation of the hip. On the following day an incision was made over the hip-joint and pus was evacuated from the joint. No evidence of any bone disease could be detected. The joint was accordingly washed out and the wound closed with the exception of a small gauze drain, after which the boy made an uninterrupted recovery. Either the case belonged to a group distinct from that described by Mr. Owen or the radical procedure advocated in Mr. Owen's paper was not always necessary. In the former case it was difficult to see how such a case could be distinguished clinically from those cited by Mr. Owen.

Dr. STUART MACDONALD cited a case of a boy, aged sixteen years, whose illness had lasted seven days. He had pain and swelling in the upper part of the thigh. An abscess was opened and the joint appeared to be normal and no further operation was carried out. The boy, however, died on the following day and at the necropsy it was found that the joint contained 2 drachms of pus and the whole body showed signs of general pyæmic infection. On making a section through the head of the femur no evidence of any inflammation along the epiphysis could be found, though there was some thickening and separation of the periosteum about the neck of the bone. In some of these cases when the disease began in the periosteum recovery might result from simple irrigation of the joint.

The PRESIDENT remarked that some years ago he wrote a

paper on pyæmia and that he had pointed out that the cases of what he had called "acute ostitis" were the most typical cases of advanced pyæmia associated with purulent pericarditis and with abscesses in the tongue. He related a case of infection of the hip-joint of six days' duration in which after evacuating the pus from the joint, he drilled the neck of the bone and let out a sero-purulent fluid. The patient recovered. He could not therefore follow the strong opinion expressed by Mr. Owen that it was necessary to use freely the gouge, the scoop, and germicides. He insisted that the process of drilling the bone should not be omitted.

Mr. OWEN, in reply, thought that the term "acute ostitis," as suggested by the President, might be used with advantage, but even that was likely to be misunderstood and misused. He said that he was not in favour of excision in early tuberculous disease of the hip-joint, as Mr. Barker seemed to suggest. He was of opinion that the disease did not begin in the epiphysis, but started in the end of the diaphysis. He had possibly, as suggested by Mr. Spencer, somewhat exaggerated the importance of the situation of the diaphysis in the hip-joint with regard to the occurrence of suppuration in the joint. He was of the opinion that the case quoted by Mr. Golding-Bird was one of acute purulent synovitis and not a case of the variety which he had described in his paper.

Mr. T. LYNN THOMAS exhibited two specimens of (1) Excision of Traumatic Structure of the Urethra and (2) Excision of Goitre.

EPIDEMIOLOGICAL SOCIETY.

Sanitary Progress and its Results.

A MEETING of this society was held on Nov. 18th, the President, Dr. H. F. PARSONS, being in the chair.

The PRESIDENT delivered the Inaugural Address of the Session 1898–99, on Half a Century of Sanitary Progress and its Results. It was, he said, just fifty years since the passing of the first general Public Health Act, and the last published report of the Registrar-General was the fiftieth since the classification of causes of death had been carried out uninterruptedly. In 1844–45 the Health of Towns Commission issued reports on the sanitary conditions of what were then the fifty largest towns in the kingdom, and the state of things therein described was almost incredible. The poor lived in slums such as were now rarely to be seen, cesspits were universal, and often within the houses, pipe-drains were unknown, and flat-bottomed, pervious brick drains for the carriage of slop waters were confined to the best streets, open gutters receiving the filth elsewhere; traps did not exist and the air of streets and houses alike was poisoned with stenches; the water-supply was drawn from polluted wells or from rivers without filtration and stored in open butts, &c.; and filth of every kind was accumulated in middens and laystalls in the most crowded quarters. Fevers were rampant and consumption decimated the population, while the condition of the rural districts was little if at all better. In 1838–42 the average death-rate was 22·1 per 1000, of which 4 per cent. were due to fevers, and in 1847–50 it was 23·4 per 1000, that from fevers being 5·3 per cent. On the other hand in 1891–96 the death-rate was 18·1, with 1 per cent. only due to fevers. In London the mortality from fevers had sunk from 1·339 per 1000 inhabitants in 1838-40 to 0·142 in 1891–96, or one-tenth of the former rate. Some of this improvement was doubtless due to the better social conditions of the people, for, as Lord Macaulay in his history published in 1848 pointed out, instead of one person in 40, one in 23 died every year in London in the time of Charles II., and since he wrote this wages had risen, the food of the working classes had improved, the consumption of meat had increased enormously, while the greater facilities for intercommunication and migration had tended to equalise the labour market so that since the cotton famine in the early sixties there had been no widespread distress sufficient to affect the public health, and the proportion of persons in receipt of Poor-law relief had been reduced from 57 per 1000 in 1849–51 to 23·4 in 1892–6. It was impossible, too, to ignore the progress of medicine and surgery, especially the antiseptic treatment of wounds, which had greatly lessened the fatality of accidents incident to the extension of machinery into every industry. On the other hand, there were conditions tending in the contrary direction, such as the aggregation of the population in towns. The proportion of persons resident in urban districts to 100 in rural had risen from 100 in 1851 to 212 in 1881 and 258 in 1891; and at the last census the number of persons resident exceeded those born—in London, by 18 per cent., in Lancashire by 19, and in Glamorgan by 42. In purely rural districts the reverse proportion was met with, the persons throughout the country born in Huntingdonshire exceeded the population of that county by 38 per cent. This migration to towns tended to a higher death-rate, the comparative mortality of the agricultural labourer being the lowest of all among the working classes, the death-rate during the last ten years having been 19·5 in the town as against 16·9 in the country districts, or if corrected for age and sex 22·32 and 16·95 respectively; while the density of population throughout the country had risen from 325 per square mile in 1851 to 527 in 1896, the increase being, of course, much greater in the towns and in industrial districts. Dense population tended to raise the death-rate, especially from infectious diseases, the spread of which was also favoured since 1870 by compulsory school attendance. The first general Public Health Act was passed in 1848, the year following the earliest attempt at legislative control of water-supplies. It was based on the recommendations of the Royal Commissioners and dealt with most of the matters covered by subsequent Acts, though infectious diseases received but scant attention, and it was to a great extent partial and optional in its application. The General Board of Health which was then created did noble work, but being considered in advance of public opinion was abolished in 1854, its functions being relegated to the Privy Council and Home Office until, in 1871, they were transferred to the newly constituted Local Government Board and the sanitary authorities. The sanitary authorities experienced changes, not always for the better, under the Local Government Act of 1888; though the creation of the county councils, especially when they appointed county medical officers of health, led to better control of the rural districts. The Sanitary Acts of 1855, 1866, 1872, and the Public Health Act of 1875—a codification of the preceding, further amended and strengthened by the Public Health Amendment Act of 1890—the Infectious Diseases Acts of 1889 and 1890, and those for the Housing of the Working Classes of 1868 and 1875 amalgamated by that of 1890, and lastly the Public Health Act for London of 1891, had brought the sanitary administration of the country to its present state of efficiency. The Vaccination Act of the present year was, however, a retrograde step, and the defaults, who had risen from 4 or 5 per cent. of infants born twenty years ago to 20 per cent. in 1894, would probably soon amount to a majority. Sewerage was now almost universal in towns and the drainage of houses was yearly becoming more satisfactory, though the question of the disposal of sewage was still unsettled, various methods being employed more or less provisionally. The health of towns was improving through better sanitation, opening up of thoroughfares and open spaces, new building regulations, the abolition of slums and the tendency to the erection of warehouses in the central parts, the displaced population migrating to suburban districts. Hospitals for isolation of infectious diseases were springing up everywhere, and were now willingly utilised by the parents of children not only of the poor but of the middle-classes.

The average annual death-rate had sunk from 23·1 in 1847–51 to 18·1 in 1892–96, with a saving on the population at the last census of 145,000 lives per annum; in the rural districts it had fallen from 19·9 to 16·7, and in the urban from 24·7 to 18·8. In the thirty-three largest towns it was now 20, scarcely more than in the country districts from 1851 to 1860. That this improvement was due to sanitary measures was evident from the fact that it began with the passing of the Public Health Act of 1872 and had been greater in each successive quinquennium, though for the twenty years 1851–71 it had been practically stationary. It was most marked in the zymotic class, the death-rate per 1,000,000 from continued fevers having fallen from 1184 to 184, that from scarlet fever from 1001 (in 1862–66) to 118 (in 1892–96). Typhus fever had almost disappeared, but diphtheria seemed to be increasing and there was unfortunately no great diminution in the general mortality of infants. A comparison of successive life tables showed that while the mean duration of life was greater by four years for males and six years for females fewer persons reached *extreme* old age, though more survived to or beyond middle life; and consequently cancer,

diabetes, and other diseases of advanced life appeared to be greatly on the increase. Enteric fever was most prevalent in the northern counties, where sanitation was less advanced and the "midden" still held its ground. Epidemics, like those at Maidstone, Newport, Worthing, and Kidderminster, caused by casual pollution of public water-supplies, occurred from time to time in various places. "Diarrhœa," though properly a symptom only and now often registered as enteritis, was in the form of infantile diarrhœa prevalent in the autumn under certain meteorological conditions. This was a specific disease and more confined to towns, the etiology of which deserved further study, as did the peculiar and changing distribution and prevalence of diphtheria. The remarkable reduction in the mortality from scarlet fever was to be ascribed rather to the lesser fatality which had marked it of late; for it was still very prevalent and in local outbreaks, amid grossly insanitary conditions, exhibited all its former virulence. After the widespread epidemic of small-pox in 1871–72 vaccination became general and small-pox had in consequence almost disappeared as a cause of death, especially in those towns where the cases were removed to hospitals beyond their borders; but the outbreaks at Leicester, Sheffield, Gloucester, and Middlesbrough, afforded indications of what we might expect from the abandonment of general vaccination. The last disease he would consider was tuberculosis, which in all its forms, with one exception, had shown a marked reduction, the mortality from phthisis being now less than half that which it was fifty years ago—a result attributable to the better drainage of land, the improved ventilation and sanitation of houses, factories, and workshops, and the higher standard of living and comfort now enjoyed by the mass of the people. The one exception was that of tabes mesenterica or the intestinal tuberculosis of infants, which was certainly to be attributed to the increasing use of the milk of cows, a large proportion of these animals suffering from tuberculosis. Such milk could be rendered innocuous by boiling or sterilisation; and attention having been called to the subject it might be hoped that steps would be taken to reduce, if not to stamp out, the disease in dairy farms. The discovery of the bacillus had fully explained the etiology of tuberculosis in every form, and could the public mind be brought to realise also the dangers arising from the diffusion of the dried sputa of phthisical persons the prevalence of this disease might be reduced to a point hitherto unhoped for or deemed beyond the possibility of attainment.

SOCIETY OF ANÆSTHETISTS.

Pure Anæsthetics.

A SPECIAL meeting was held on Nov. 17th at the society's rooms, 20, Hanover-square, W., the President, Dr. DUDLEY BUXTON, being in the chair. It was decided to alter the day of meeting from the third Thursday to the third Friday in each month. At the conclusion of the special meeting the first ordinary meeting of the present session was held.

The PRESIDENT in welcoming the members at the opening of the session urged upon them the necessity for individual effort in promoting the interests of the society.

Professor W. RAMSAY, F.R.S., read a paper on Pure Anæsthetics. He drew attention to the unpleasant effects produced by giving chloroform in the presence of lighted gas or lamps. The pungent odour affecting the eyes, nose, and throat was due to the formation of carbonyl chloride the result of burning chloroform vapour. The body was a gas at ordinary temperatures which condensed to a colourless liquid, and in the presence of moisture decomposed into carbonic acid and hydrochloric acid. Chloroform on exposure to sunlight or diffused daylight and to air undergoes decomposition with the formation of phosgene gas. The addition of alcohol prevented the formation of carbonyl chloride when moist air and light were excluded. Other impurities were practically eliminated by ordinary care in the manufacture. The best test of the presence of carbonyl chloride was, he thought, to breathe it when its irritant action on the throat revealed its presence. To remove this impurity agitating the suspected chloroform with slaked lime proved effectual. The chloroform was then filtered off. Professor Ramsay quoted statistics, collected by Dr. Newman of Glasgow, which showed that the use of chloroform thus purified lessened the after-effects. Referring to ether, Professor Ramsay stated that a sticky residue, which was probably an ethyl peroxide, was liable to be formed in ether which had been exposed to light and air. To purify ether it was suggested that to shake it with metallic mercury was the most satisfactory method. The "A.C.E. mixture" had been investigated by Mr. Smiles for Professor Ramsay. He found that the presence of alcohol might be considered of no advantage while the percentage of chloroform in vapour rapidly increased until finally it was as much as 62 per cent.

Mr. WILLETT thought the test by smell was inadequate. He regarded the method adopted by Professor Ramsay in estimating the evaporation of the constituents of "A.C.E. mixture" as too dissimilar to what obtained when that mixture was employed clinically to carry much weight.

Dr. SILK referred to the different views held by anæsthetists with regard to what makes of chloroform and ether contained the least impurities and were therefore best for inhalation. He believed that methylated ether was as good as pure ether, but thought most opinions favoured the use of pure chloroform.

Dr. A. COOK contended that the "A.C.E. mixture" if given from a Rendle's mask was not evaporated in the irregular manner suggested by Professor Ramsay. He thought it possible that carbonyl chloride might be produced even without the presence of a flame and instanced a case in which an irritating vapour was given off from chloroform in the daytime.

Mr. MCCARDIE said he had been informed that some methylated spirit contained a certain amount of naphtha which might possibly account for some of the impurities of methylated ether, although his experience went to show that the methylated ether was as good clinically as pure ether.

Mr. CARTER BRAINE quoted two cases in which chloroform which had been exposed to air for a fortnight had caused great coughing and distress to the patient.

Dr. PROBYN-WILLIAMS had read of severe symptoms leading to death ensuing upon the administration of chloroform in the presence of lighted candles during a prolonged abdominal operation undertaken at night. His experience showed that methylated ether was in every way satisfactory.

Mr. E. F. WHITE corroborated this view. He thought it was a matter of importance to elicit whether ethers of different specific gravities differed in their clinical behaviours. Referring to Dr. Newman's results he thought the amount of sickness noted was excessive and more than was usual by the methods in use in England.

Dr. E. A. STARLING believed that the methylated chloroform and ether produced more after-effects than the pure anæsthetics. The A.C.E. mixture he considered to be unreliable, and his clinical experience bore out the experiments which Professor Ramsay had quoted.

The PRESIDENT, after thanking Professor Ramsay for his valuable paper, drew attention to the fact that impurities in chloroform and ether might be introduced during the process of manufacture or as a result of exposure. In the "Pictet" process, although an absolutely pure product was secured, yet it was largely diluted with added alcohol to maintain its purity, and was even then as liable to subsequent decomposition as other varieties. The same remark applied to the more modern methods of manufacture from the grey acetate of lime and by the chloral process.

Professor RAMSAY, in reply, believed that most of the reliable manufacturers turned out pure chloroform and ether. No naphtha impurities appeared in the methylated ether. The "Pictet" method was inferior to those depending upon fractional distillation for their purification.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—After-Treatment of Abdominal Section.—Combined Method of Pelvic Surgery.

A MEETING of this society was held on Nov. 10th, Dr. H. MACNAUGHTON-JONES, President, being in the chair.

Dr. J. MACPHERSON LAWRIE (Weymouth) showed (1) a large Broad Ligament Cyst and (2) Double Broad Ligament Cysts.

Dr. HERBERT SNOW resumed the adjourned discussion on Mr. Christopher Martin's paper on Some Moot Points in the After-Treatment of Cases of Abdominal Section. He held

that after-treatment was of more importance than the actual operation. Cleanliness and dryness were the cardinal points, and they were more important than antiseptics. As regards sutures he thought it important to secure the peritoneum separately, but it was often a waste of time to suture the fascia and skin separately. He agreed with Mr. Martin that silk was not reliable and that it might give rise to sinuses and sepsis. For purgation he preferred an enema at the end of forty-eight hours; after that morphia might be given if necessary. But he had a strong prejudice against the drug, especially as it increased the tendency to constipation.

Dr. C. H. F. ROUTH was an advocate of drainage in every case. He objected to iodoform for the wound, since it might give rise to poisoning by absorption. His plan was to dip cotton-wool in iodine and to apply it to the sides of the wound. He discountenanced morphia and considered that trional and paraldehyde were far better as they were sedatives without any injurious effect.

Dr. BANTOCK remarked that the paper was concerned with matters of detail on which there would always be room for divergences of opinion. He agreed with Mr. Martin on some points, such as the importance of dry dressings and the value of silkworm gut as a suture material. But on other points he disagreed, for instance on the question of posture and the administration of morphia. Why did Mr. Martin use iodoform and boric acid in septic cases? For his part he endorsed the dictum of Knowsley Thornton that it was no use employing antiseptics when the patient was herself septic. In the case of a healthy young subject the abdominal wound could quite well be closed in one layer, but in emaciated women separate layers were necessary, requiring buried sutures. Stitch abscesses were caused simply by tying sutures too tightly. His rule as to drainage was—when in doubt drain, for if unnecessary it could do no harm, whereas if not used when it ought to be the patient's doom was sealed in forty-eight hours.

Mr. BOWREMAN JESSETT agreed with Mr. Martin's views as to posture, but pointed out that moving must be carefully done and not by the patient, but by a skilled nurse. When drainage was used he thought the patient should be kept on her back. Formerly he sewed the wound in one layer with silkworm gut, and if all the tissues were included this often answered perfectly. But there was a risk of drawing up the peritoneum between the muscular layers. He now generally sewed up in three layers. He had abandoned silk and silkworm gut for buried sutures, and used instead catgut prepared according to the directions of Martin of Berlin. For the skin he used silk or horsehair. His rule about drainage was, like Dr. Bantock's—when in doubt drain. The administration of morphia must depend on the patient; it was generally indicated in neurotic cases. As to purgation, he generally got the bowels open on the second day.

Dr. PURCELL remarked that the preparation of the patient had a great deal to do with the after-treatment. The opening of the peritoneum was an important point; it was better to go not through the linea alba but through the rectus muscle. If a drainage-tube were used a loose suture should be put in and tied. He generally purged early, giving 5 gr. of calomel on the second day. He had once lost a patient through morphia and had given up its use.

Mr. CHARLES RYALL asked Mr. Martin why he waited till the fourth day before purging the patient. He saw no reason why an aperient should not be given on the night after operation.

Dr. TRAVERS thought the dressing was one of the most important things. He used a dusting-powder of chinosol and boric acid. Morphia should be given sparingly and in small doses—$\frac{1}{4}$ gr. was usually sufficient. For purgation he relied largely on calomel and did not give enemata if he could help it.

Dr. HEYWOOD SMITH was glad to hear favourable opinions about calomel. One of the most anxious symptoms after operation was flatulence, because the question always arose whether it was the precursor of peritonitis.

The PRESIDENT regarded the dorsal position after operation as most important and as anatomically indicated. He always sutured the wound in three layers, using silk for the peritoneum and fascia and silkworm-gut for the skin. He thought Mr. Martin went too far when he said that stitch abscesses should not occur in clean cases, but at the same time he did not agree with Dr. Bantock that they were due to sutures tied too tightly. He would say—when in doubt drain, for he thought that blood should not be left in the peritoneal cavity, even clean blood. He never gave morphia. For purgation he preferred sulphate of magnesia given on the second or third day in drachm doses every half hour or hour till the effect was produced.

Mr. CHRISTOPHER MARTIN briefly replied.

Mr. STANMORE BISHOP (Manchester) read a paper on the Combined Method in Pelvic Surgery, the discussion on which was postponed till the next meeting.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Cancer in Relation to the Dwelling.

A MEETING of this society was held on Nov. 11th, Dr. E. GWYNN, President, being in the chair.

Dr. W. H. SYMONS read a paper on Cancer in Relation to the Dwelling, a subject to which he said he had turned his attention since his appointment as medical officer of health of Bath, in the hope that the study of the vital statistics of a city notorious for its high mortality from cancer, and the population of which was exceptionally constituted, might throw some light on certain aspects of the etiology of cancer. For forty years the population of the borough had been stationary, amounting to about 52,000, of whom two-thirds were females. The proportion of persons over sixty-five years of age was 76, as against 45 in England and Wales, and of children under five years of age 89, instead of 123, per 1000 living; while that of persons living on their own means was 101, as against 36, Hastings only among towns in the southern counties having a like proportion. The health of the town was good and improving, the actual number of deaths being as follows:—

—	Standard fully corrected.	Mean, 1881-90.	Mean, 1891-5	1896.	1897.
All causes	1056	1043	931	921	361
Typhoid fever	12	5	3	5	3
Phthisis	94	38·5	73·2	61	64
Other respiratory diseases	377	361	345	300	308
Cancer	**42**	**53·8**	**57·4**	**62**	**65**

At the same time cancer had shown a steady increase until the deaths were 50 per cent. higher than they should be after correction for age and sex. In the English counties, great as were the differences in the crude and even the standard death-rates from cancer, the extremes fell between + 10 and − 10 per cent. if the population over thirty-five years of age were alone taken into account. Dr. E. N. Nason, Dr. T. W. Blake, and Dr. Lloyd Jones had endeavoured to establish a relation between the conditions of the habitations of a people and the prevalence of cancer, Dr. Nason maintaining its preference for low-lying, damp dwellings as Mr. Haviland had for places liable to floods; but the high death-rate of Shrewsbury could not be so explained since but a small part of the town was affected by the inundations. The city of Bath, situated in a deep valley traversed by a sluggish river, on a dense surface soil overlying lias and oolite, with ground-springs and hard water, and surrounded by steep, in some places precipitous, hills, from 300 ft. to 500 ft. in height, presented every variety of site. Some local practitioners believed in the existence of a "cancer zone," but he could find nothing in the distribution of the cases to support this opinion, though there were some peculiarities, as that of a street in which 13 deaths had occurred in ten years on one side and only one on the other. Neither the elevation nor the aspect nor the class of house seemed to have any constant relation to the incidence of the disease, while the fact that in the course of thirty years 4 deaths had never been known in the same house, 3 in six only, and 2 in very few, the vast majority being the only ones recorded, seemed conclusive against any hypothesis of the disease being influenced by the conditions of the dwelling.

Dr. NEWSHOLME believed the increase of cancer to be apparent rather than real, due to better diagnosis and certification. This view was supported by the fact that in insurance offices whose members were of a class able to

command skilled medical advice no such increase had been observed, nor was it so marked among women in whom the organs mostly affected were palpable, the increase being mainly in the cancers of the stomach, liver, &c., especially among men, which were formerly registered as "internal disease" or other vague designation. Street distribution resolved itself into social differences, and these involved those of mean age and therefore of liability to cancer. In comparing towns the presence of large hospitals must be considered and whether these were county hospitals or not, for the Registrar-General excluded the deaths of strangers in the case of the former only. The death-rate among persons over thirty-five years of age was dependent on the mean longevity of the classes to which they belonged; thus, among farmers over that age it was 23 per 1000 and among tailors 20 only, simply because fewer of the latter attained to the age at which cancer was most frequent.

Dr. HERBERT SNOW (present by invitation) maintained that all statistics dealing with cancer as one disease instead of a group of diseases having little in common were necessarily fallacious. There were in all predisposing and exciting causes. Thus, epithelioma commonly followed the mechanical irritation of an unhealthy mucous surface. Carcinoma, a glandular neoplasm, was in the female organs a deviation from the normal devolution or degeneration of the uterus or breast, when their functions ceased to be exercised, induced by previous excessive activity or other depressing influences. Heredity could be asserted of "blastomata" only and sarcomata differed essentially from the rest of the so-called cancers. Cancer was a disease of civilised life and was more frequent in domestic animals than among wild ones, and especially so in cows whose lives were most removed from a state of nature and who were subject to debilitating influences and local irritation.

Dr. SYMONS, in replying, remarked that while the large number of retired officers and elderly ladies in Bath would tend to the greater prevalence of cancer, the excess of females over males, as 150 to 100, and in Bathwick as 200 to 100, being chiefly due to the number of domestic servants, would have the opposite effect, they being largely drawn from the country, whither they returned if ill.

LIVERPOOL MEDICAL INSTITUTION.

Nutshell in the Larynx.—Exhibition of Radiographs.—Rupture of the Membranous Urethra.—The Open-air Treatment of Tuberculosis.

A MEETING of this society was held on Nov. 17th, Dr. MACFIE CAMPBELL, President, being in the chair.

Mr. MITCHELL BANKS read notes of a case of a Piece of Nutshell in the Larynx removed by tracheotomy from a girl aged seven years. The foreign body was seen by Dr. Hunt to lie immediately below the cords, the vocal cords being excoriated by its passage. The child had a severe attack of dyspnœa in the night and next day Mr. Banks performed tracheotomy and removed the foreign body.

Mr. BANKS also showed Radiographs of (1) a Bullet in the Foot and (2) a Bullet in the Thigh (photograph taken by Mr. C. T. Holland).

Dr. ALEXANDER described a case of Complete Rupture of the Membranous Urethra in a man, aged twenty-seven years, who was run over by a dray and sustained in addition a compound fracture of the right femur. A sac filled with blood and serum was found on perineal section in front of the bladder. This sac was at first mistaken for a ruptured bladder and drained. Next day the bladder was found, pushed far back at the pelvis, and completely separated from the urethra; it was opened by Cock's method. The bladder was drained by tube and the large sac by gauze. The necessary splints for the fractured thigh interfered somewhat with after treatment but the patient was going on well.—Mr. BANKS and Mr. RUSHTON PARKER spoke.

Dr. NATHAN RAW read a paper on the Open-Air Treatment of Tuberculosis in Sanatoria. He alluded to the general prevalence and high mortality from tuberculous disease, which, although diminished in recent years by improved sanitation and food inspection, still ranked too high. He mentioned the poor results of treatment in general hospitals and considered it unfair to both the patient and the other inmates of a general ward that he should be treated therein. He combated the "inheritance" of phthisis and insisted on its infectivity. He concluded by considering it the duty of the legislature to deal thoroughly with the question of cure in sanatoria, and urged municipalities, boards of guardians, &c., to establish sanatoria.—The PRESIDENT, after congratulating Dr. Raw upon the excellence of his paper, remarked that while by the tables shown the mortality from tuberculous disease in adults had enormously decreased Sir Richard Thorne had pointed out that the mortality from this cause under one year of age had increased—due, he thought, to the greater use of cow's milk at that age. A pure milk-supply became a necessity. Country milk brought into Liverpool had been shown by Dr. Hope to contain the bacillus of tubercle in 13 per cent., while milk from town shippons only contained it in 4 per cent. It was interesting to know that heating milk to 195° F. was sufficient to sterilise it.—Dr. HOPE emphasised the close identity between measures which had been successful in the prevention of tuberculosis and measures which promised to be successful in treatment. He did not consider that under existing circumstances any useful purpose would be served by scheduling tuberculosis as one of the notifiable infectious diseases, but there were no doubt cases in which the medical officer of health might with advantage supplement the advice and action of the medical adviser, and it was desirable that in every case thorough disinfection of the house, &c., should take place. The remarkable decline in the mortality from tuberculous disease in Liverpool was in the main owing to sanitary measures having as one principal object improvements in ventilation. These improvements, carefully thought out and slowly elaborated, had reduced the mortality per 100,000 from all forms of tuberculosis from 430 in 1866 to 292 in 1896, the rate above five years of age from phthisis having fallen from 363 to 233, and below five years of age from tabes mesenterica, &c., from 637 to 497 in the period alluded to. He remarked on the analogy furnished by tuberculosis in cows, those shippons which were ill-ventilated and insanitary being centres of infection, whilst in the well-ventilated ones the disease was rare. 4 per cent. of the samples of milk taken from shippons in Liverpool were found to be tuberculous, but in samples of country milk more than three times that amount was found—viz., 13 per cent. This instances the much greater advance made in cities than in rural districts in these matters.—Dr. BUCHANAN considered it necessary in the treatment of tubercle to remove the patient to an atmosphere from which the tubercle bacillus and other organisms were absent, and, if possible, to one in which they cannot live and at the same time to increase the resistance of the host. He advocated sanatoria for collective cases but urged that we must all strive to make a man's dwelling his sanatorium. Fifty years ago Professor Virchow said "it is the duty of mankind to overcome tuberculosis as scurvy has been overcome."—Dr. CATON, who had visited various foreign sanatoria, expressed regret that hitherto Great Britain should have lagged behind continental nations in this matter. In proximity to every great centre of population sanatoria ought to be established by municipalities, county councils, or boards of guardians. The expenditure involved would in the end prove an economy as well as delivering the population from the scourge of tuberculosis. General hospitals ought not to admit cases of phthisis. Dr. Caton urged the desirability of making widely known the infectivity of phthisis.—Dr. A. DAVIDSON pointed out that the principle of open-air treatment of phthisis was not new and quoted from Dr. Hughes Bennett's book, published in 1853, where it was considered of supreme importance and where he deprecated the sending of phthisical patients to warm climates abroad. Dr. Bennett expressed a hope that large sanatoria would be established in this country. Dr. Davidson referred to the great success which, in his experience, attended the plan of sending young phthisical patients to winter on the north cost of Wales.—Dr. GRUNBAUM thought that, desirable as sanatoria might be, too much must not be expected and promised as regards results. The infectivity of phthisis was of a different order to that of typhus fever, small-pox, &c., as was probably also the morbific agent. The evidence showed that hygienic measures had not the same remarkable effects on tubercle, typhoid fever, and diphtheria as on scarlet fever, small-pox, and typhus fever.—Dr. T. R. BRADSHAW hoped the discussion would lead to some practical steps being taken in Liverpool. He thought a good deal was to be said for notification; it need not of necessity prevent

a phthisical patient from following his employment, as each case could be treated on its merits. He mentioned instances where permitting phthisical patients to follow their occupations indiscriminately as at present was not without danger to other persons. He thought the Medical Institution ought to endeavour to move the public in the matter.—Dr. ABRAM gave two instances to illustrate the marked infectivity of pulmonary tuberculosis. He drew attention to what, in his opinion, was generally overlooked—namely, that the reputation of the open-air treatment was in the main based on the results obtained in high-altitude sanatoria. He counselled moderation in urging the virtues of low-lying sanatoria lest there should come a reaction in the public mind with regard to the provision of pure air for tuberculous patients.—Dr. CARTER, Dr. BARR, Dr. GLYNN, Dr. MACALISTER, Mr. S. KELLETT SMITH, and Dr. STOOKES took part in the discussion.

CLINICAL SOCIETY OF MANCHESTER.

Exhibition of Cases.—Extra-uterine Pregnancy.—Placenta Prævia.

A MEETING of this society was held on Nov. 15th, Dr. A. HILL GRIFFITH, President, being in the chair.

Dr. JUDSON BURY showed the following cases of Nervous Disease:—(1) Hemiplegia from Embolism the result of Aortic Disease; (2) Hemiplegia the result of Syphilitic Endarteritis; (3) Syringomyelia; and (4) Chronic Anterior Poliomyelitis affecting a Limb already Atrophied in consequence of Infantile Paralysis in Early Life.

Dr. WAHLTUCH showed two cases. The first was that of a man, aged forty-two years, who had come under his care at the Hulme Dispensary on Oct. 27th, 1898, suffering from Paralysis of the Median Nerve. He had been ill since May 23rd, when he awoke with pain in the neck and along the left arm, the forearm, and the palm of the hand. There was numbness in the second and third, and, to some extent, in the fourth, fingers. Treatment by massage and electricity twice a week had been carried out during the preceding three weeks. The patient had felt better after each application; the pains were less frequent and less severe and the numbness was almost gone. The second case was one of Paralysis of the Deltoid of the Left Arm. The patient, a man, aged sixty-four years, had had a fall in August last, and a fortnight later had felt weakness and pain in the left arm, especially in the deltoid. The muscle was wasted and the patient could not lift up his arm. He had attended as an out-patient at the Hulme Dispensary on Oct. 1st. Treatment by massage and electricity had been carried out. Slight improvement had taken place at the end of four weeks.

Dr. DULBERG showed a case of Subacute Articular Rheumatism in a patient who was undergoing the Tallerman treatment. He had benefited considerably, although he had had only three baths. The treatment was described and the opinion was expressed that it deserved to be tried in suitable cases.

Dr. T. ARTHUR HELME read notes of a case of Extra-uterine Pregnancy of Twelve Years' Duration. The history pointed to the facts that the extra-uterine pregnancy had existed for twelve years; that ten years ago the patient had given birth to a child *per vias naturales*, whilst the ectopic pregnancy was still there; and that the latter had lain dormant until two years ago, when suppuration began and pus was discharged *per vaginam*. Dr. Helme opened through the posterior vaginal fornix, removing the fœtal skeleton and draining the sac through the vagina.

Dr. HELME also discussed the Treatment of Placenta Prævia, dealing especially with the central variety and showing the correctness on anatomical grounds of Barnes's description of his method of "stripping the placenta" from that portion of the uterus below Barnes's boundary line, now known as Bandl's ring—the contraction or retraction ring.

EDINBURGH OBSTETRICAL SOCIETY.

Presidential Address: Surgical Interference in Gynæcology.—Latency of Gonorrhœal Infection.

A MEETING of this society was held on Nov. 9th, Dr. HALLIDAY CROOM, President, being in the chair.

The following office-bearers were elected for the ensuing session:—President: Dr. J. Halliday Croom. Vice-Presidents: Dr. N. T. Brewis and Dr. J. W. Ballantyne. Treasurer: Dr. W. Craig. Secretaries: Dr. J. Haig Ferguson and Dr. W. Fordyce. Librarian: Dr. R. Milne Murray. Editor of Transactions: Dr. J. W. Ballantyne. Members of Council: Professor Simpson, Dr. Alex. Ballantyne, Dr. Melville Dunlop, Dr. F. W. N. Haultain, Dr. Owen Mackness, Dr. Macvie, Dr. Berry Hart, and Dr. T. Brown Darling.

Dr. CROOM read his presidential address on Surgical Interference in Gynæcology. It was with satisfaction at the commencement of the sixtieth session that the society could look back upon the work accomplished in former years. Originated by the exceptional brilliance of Sir James Y. Simpson, it did much to further gynæcology in Scotland, and there was probably no society in Scotland which had met month by month and lived and flourished as this had done. During the last ten years it had preserved its obstetrical character, as there had been twice as many papers on this branch as on the gynæcological. In recent years gynæcology had progressed into a science and might now be said to be divorced altogether from obstetrics, for by easy gradations it had digressed from the domain of the physician to that of the surgeon. The obstetric physician must be relegated to the lying-in hospital, while the gynæcologist must be classed among the surgeons of a great hospital. It must ever be a difficulty to a surgeon who is not accustomed to either obstetrical or gynæcological work to make his diagnosis a certainty. There was no doubt that the surgical treatment of diseases of women had been much overdone, as in the case of removal of the ovaries and tubes for inflammatory diseases. We could not be too glad that the tendency now was becoming more and more conservative and that the perfected methods of antiseptic surgery enabled us to deal with even limited areas of affection in ovaries and tubes. We realise that it is only in grave pathological lesions that these organs should be entirely removed. The means of dealing with a tubal pregnancy before rupture were well determined and its removal was a matter of comparative safety compared with the risks of rupture. But it was just possible that the resort to the knife had been overdone and that many early ectopic gestations, even after rupture, had become absorbed and disappeared without the arbitrament of the knife. The operation for the entire removal of the uterus by the vagina had developed enormously. It could be done swiftly and easily in a few minutes, but the question was in the case of carcinoma if it tended to the prolongation of the life of the patient. It stopped hæmorrhage and fœtid discharge, but relief was only temporary. Even temporary alleviation would be an advantage were it not that with the recurrence of the disease the ultimate pain and suffering were greater than if there had been no interference at all. In an experience of twenty years Dr. Croom had tabulated every case of malignant disease of the uterus which had come under his supervision. They amounted to 260, and of these only 15 fulfilled all the conditions requisite to justify hysterectomy with expectation of success. Of these 12 were operated on, and though the patients—to use the hackneyed phrase—made absolutely uneventful recoveries they all died within a year and, in Dr. Croom's opinion, with greater suffering than if they had been left alone. This applied to several cases in which the disease was absolutely confined to the fundus and where, as far as could be made out, there was no involvement of the broad ligament; and yet in all the disease recurred in the peritoneum and the patient died in great distress within the year. After an initial diagnosis of cancer a woman's expectation of life was from two to two and a half years. Many forms of cancer were painless and most destroyed life by hæmorrhage, exhaustion, and uræmic poisoning. The question was: Did women live longer lives and die less painful deaths if the uterus were removed or if the disease were allowed to run its ordinary course? In Dr. Croom's opinion surgical interference was better left alone. Statistics might be given of the German results, but whatever the explanation might be, neither in this country nor in America could results be obtained at all in comparison with what the Germans claim. Cancer in Germany must be one thing and cancer in Great Britain another, or the respective diagnostic skill of the two countries must vary considerably, or women must present themselves to German surgeons at a period when the disease was in its most initial stage, when it was confined to a small nodule in the cervix or limited to the mucous membrane of the cervix. Another explanation of the discrepancy might be that cases of marked cervical catarrh and gross erosion.

had been mistaken for cervical cancer and treated as such. This had occurred in the personal knowledge of Dr. Croom. And it was easy to mistake advanced senile uterine catarrh of a pronounced type for a fundal cancer. In all Dr. Croom's cases before operation the suspected tissue was examined microscopically. The whole point was that it was quite conceivable that with a cancer very early diagnosed and operated on the prolongation of life was possible, but after a cancer had developed beyond its most initial stage Dr. Croom held that the removal of the uterus did not prolong life and that the subsequent death was infinitely more terrible. As regarded the operation perhaps Edward Kelly, acting on Freund's suggestion, might be on the right lines in giving up vaginal hysterectomy for cancer and dealing with the whole uterus and broad ligaments from above. The operation of vaginal hysterectomy had been so improved that anything less than a successful immediate issue would be scarcely warranted, but that "the patient left the hospital well" was no addition to our knowledge of results. Cancer was extraordinarily prevalent, but in our efforts to ameliorate it we seemed to have come against a dead wall. It was possible that the solution of the question might yet be found in treatment in some animal extract or in the principle of antitoxin remedies. In groping for light it was our duty to keep an open mind for any theory and to welcome any suggestion, however extreme, in dealing with this awful disease. At the present day every surgical proceeding was accepted and adopted; it was striking to think how medical innovations were received with distrust. Even anæsthesia was at first scorned and regarded in the light of charlatanism. With regard to hysterectomy for conditions other than cancer, such as prolapsus, subinvolution, and inflammatory disease of the uterus and appendages, the operation was one which from its simplicity required to be safeguarded. It bade fair to be overdone. Unlike uterine cancer, these diseases were not in themselves necessarily fatal and the symptoms and discomfort to which they gave rise could in many cases be alleviated by other less drastic measures. In small bleeding fibroids and prolonged hæmorrhages from the uterus which had resisted all other means of treatment this operation gave, perhaps, the best prospect of cure. With regard to fibroids, removal of the ovaries for bleeding or rapidly growing tumours was gradually being supplanted by the operation of abdominal hysterectomy, an operation much more certain in its results though more dangerous for the moment. Even yet the death-rate was high and it was an operation which, except in the hands of experienced operators, was not to be undertaken without considerable anxiety.

Dr. MILNE MURRAY read notes on a case bearing on the Latency of Gonorrhœal Infection. He had attended a woman in three confinements; the mother did well each time. The first two children were healthy and remained so. The third child showed signs of ophthalmia on the third day after labour and soon developed very severe symptoms. The right eye was affected some days after the left. The mother had not suffered from any leucorrhœa before the birth of the child and the father was at that time free from any symptoms. He had contracted gonorrhœa eight years before and to all appearance was soon quite cured. No other possible source of the ophthalmia could be found but latency in the father. Dr. Milne Murray discussed the question and adduced Noeggerath and Tait as giving cases where there was latency for as long a period.—Professor SIMPSON, Dr. CROOM, Dr. HAULTAIN, and others joined in the discussion.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—A meeting of this society was held in the library of the Royal Infirmary, Newcastle-on-Tyne, on Nov. 10th, Dr. Limont, President, being in the chair.—Dr. R. A. Bolam gave a valuable and interesting Demonstration on the Nutrient Value of various Meat Extracts, &c.—Dr. T. Beattie, in the absence of Dr. Drummond, showed: 1. A child, aged nine years, suffering from Congenital Heart in whom the cyanosis and the clubbing of fingers and toes were extreme. The murmurs present indicated pulmonary stenosis, tricuspid regurgitation, and patent foramen ovale. 2. A child, aged fifteen years, with Congenital Heart in which patent ductus arteriosus had been diagnosed. Over a limited area in the pulmonary region there were a continuous thrill and a continuous buzzing murmur having systolic and diastolic exacerbations simulating the murmur of an arterio-venous aneurysm. 3. A man with Aneurysm of the Ascending Aortic Arch which had apparently ruptured into the superior vena cava, evidenced by sudden swelling of the head, neck, arms, and upper part of the thorax, intense cyanosis, marked pulsation of the veins of the neck, continuous thrill, and a buzzing murmur heard with maximum intensity over the first and second right interspaces close to the sternum. 4. A man with Aneurysm Springing from the Left Side of the Arch and presenting above the left clavicle, and therefore simulating a subclavian aneurysm. The intra-thoracic origin was proved by definite signs of pressure on the left bronchus. 5. A case illustrating the diagnosis of Adherent Pericardium.—Dr. Beattie, for Dr. Oliver, brought forward a man showing a Pulsating Tumour in the Back presenting opposite the fourth and fifth ribs to the left of the spine. The ribs were eroded and although no bruit was audible the tumour was thought to be an aneurysm of the descending aorta.—Dr. Hume showed a young miner in whom he had Resected a Foot of Small Intestine which had been torn from its mesentery as the result of a bicycle accident, the subsequent enterorrhaphy being effected by a Murphy's button.—Dr. Hume and Dr. H. Bramwell showed an old man after operation for Cerebral Abscess following a head injury. Previously to the operation the patient had been completely hemiplegic and after evacuation of pus from the hemisphere rapidly and completely recovered.—Mr. Albert Martin brought forward the following cases: 1. A boy, aged nine years, with Bilateral Congenital Displacement of the Hip-joint, comparing the gait with that of a case of pseudo-hypertrophic paralysis. 2. An infant with Congenital Radial Deflection of the Terminal Phalanges of both Thumbs, one of which had been cured by division of resisting structures. 3. An infant with congenital suppression of the Growth of the Forearm and the Hand with Webbing of the Fingers.—Mr. Rutherford Morison showed: 1. A man after Pylorectomy for Glandular Carcinoma, who had made an uninterrupted recovery and is now able to take ordinary food. 2. Another patient who, after Pylorectomy for Glandular Carcinoma, is now able to eat anything and has passed a stone since operation. 3. A patient after Removal of the Pyloric Half of the Stomach, with specimen. Mr. Morison described by means of diagrams the method of operation and stated that now, one month after the operation, the patient was able to eat ordinary diet.—Dr. Limont showed the following interesting examples of skin disease: (1) A case of Lichen; (2) a case of Seborrhœic Dermatitis; (3) cases of Rodent Ulcer; (4) a case of Pityriasis Rubra; and (5) a case of Pustular Syphilide.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 16th, Mr. T. D. Pryce, President, being in the chair.—A paper was read by Dr. W. B. Ransom on the Vis Medicatrix Naturæ. The paper pointed out the large range of conditions under which living beings could maintain health and the great adaptability of animals and plants to variations in these conditions. Repair of injury and regeneration of lost parts were shown to be extensive in the highest, as in the lowest, forms of life and the fact of a functional reserve of energy was insisted on. The indirect influence of parts of the organism on the whole was illustrated, and, finally, the means by which the body resists the attacks of microbes were put forward.—The paper was discussed by the President and Dr. Cattle.—Mr. R. C. Chicken showed Three Stones which had been removed from a Female Urinary Bladder by Dilatation of the Urethra. There were two smaller ones lying free in the bladder itself and one large one which was contained in a sacculus. The latter measured 2¼ in. by 1¼ in. in diameter and 6½ in. by 4⅝ in. in circumference, and it weighed 795 grains. Mr. Chicken observed that in all probability the smaller stones were fragments broken off from the original one and had since grown by accretion. As far as he could ascertain, Mr. Chicken said, the large stone was the largest which had ever been removed by dilatation of the urethra and was much larger than the limit of size laid down by authorities as being sufficiently large for this method of removal to be adopted without injury. Inasmuch as there were no injurious after-effects following the operation in his case Mr. Chicken gave it as his opinion that removal by this method ought to be adopted in every case of stone in the female bladder where the size did not exceed the dimensions of the one he had removed. — Mr. Anderson showed: 1. Uterus removed by the Abdominal Method for Fibroid

Tumours. The patient's age was forty-eight years; the tumour had been noticed for three years. The menopause began two years before operation. There had been no hæmorrhage other than the ordinary catamenial discharge. The tumour had been rapidly growing since it was noticed. The whole tumour weighed 11¼ lb. and reached nearly to the liver, occupying the right loin. In parts it was calcified. 2. Two Stones removed from the Pelvis of a Kidney. Symptoms of stone had existed for twenty years, but during the whole of this time there had been no hæmaturia observed. 3. Appendix Vermiformis containing a Fæcal Concretion removed at a period of quiescence; there had been three attacks of appendicitis and there was no perforation.

BRITISH ORTHOPÆDIC SOCIETY.—A meeting of this society was held on Oct. 21st at the National Orthopædic Hospital, Great Portland-street, Mr. A. H. Tubby being in the chair.—Mr. Luke Freer showed a Modification of Holland's Arch for Flat-foot containing a pad of porous rubber in place of steel which he had found much more satisfactory.—Mr. Muirhead Little, Mr. Openshaw, and Mr. Tubby showed some interesting cases of Tendon Transplantation. In Mr. Little's cases the peroneus was inserted into the tendo Achillis. In one of these the wound suppurated freely, in spite of which there had been some improvement; another operated on in a similar manner had so far been most successful. He thought the kangaroo tendon had been responsible for the suppuration. In Mr. Openshaw's cases one had been treated by exposing and dividing the peroneus longus and tibialis posticus; then passing the forceps through an incision in front of the tendo Achillis he drew the peroneus longus across the back of the leg and stitched it to the tibialis posticus with the idea of correcting the valgus by diminishing the power of the peroneus and increasing the power of the tibialis posticus. The result had been fairly good.—Mr. Tubby showed a case of Congenital Hip Displacement treated by the Open Method. Mr. Robert Jones and he had attended the case together at the Evelina Hospital. The girl was twelve years old and had 2½ in. shortening. They made an anterior incision. There was a rough bony prominence inside the acetabulum. They made a square surface on the head of the femur, cut two-thirds through the neck of the femur, and gave it a twist to correct the inversion. Their object was not so much to make an acetabulum as to bring about fibrous union. By this method uprising was prevented, but there remained some shortening as the neck of the femur was horizontal. The case had been previously treated by Lorenz's operation.—In the subsequent discussion Mr. Reeves said that he had always opposed these operations. A case of his own which was sent to Vienna to be operated upon was not one bit benefited.—Mr. Openshaw said that he had performed six operations of the kind, but he considered that only two of them were really successful.—The discussion was continued by Mr. Eve, Mr. Noble Smith, Mr. Muirhead Little, and Mr. Keetley, and a number of skiagrams illustrative of this condition were shown.

FORFARSHIRE MEDICAL ASSOCIATION.—This society met in the University College, Dundee, on Nov. 2nd, Dr. J. Mackie Whyte, vice-president, being in the chair.—Mr. Greig showed (1) a Cast of the Head of a Microcephalic Idiot whose age at death was twenty-one years, the measurement from glabella to inion being 12 in., and (2) a Cathcartine Cast of a Hypertrophied Prepuce.—Dr. Rogers read a paper on Œdema Neonatorum, describing the case of a child who was born at the eighth month and who developed symptoms of this disease on the third day. On the eighteenth day acute enteritis set in and after recovery from this the œdema disappeared and the child is now well and putting on flesh. He believed that in this case the condition was due to atelectasis and a patent foramen ovale. He then discussed the points which distinguished it from sclerema.—Dr. Buist did not think that Dr. Rogers's case could be distinguished from one of sclerema.—Dr. Kynoch considered that œdema and sclerema were the early and later stages of the same disease.—Dr. McVicar read notes of a case of Gastrostomy which he had performed for cancer of the cardiac end of the stomach. The patient was a woman, aged fifty-three years. Up to the third day after the operation there was sickness and retching and later there was some trouble owing to leakage, otherwise the patient had done well till three months after the operation, when pain immediately on receiving food again troubled her. This, Dr. McVicar thought, was due to extension of the disease.—Dr. Buist read a paper on the Treatment of Ineradicable Cancer of the Uterus by Interference with the Blood-supply, giving an account of a case in which he had ligatured the uterine arteries and removed the ovaries. This treatment caused a diminution in the discharge, but apparently very little alteration in the rate of growth of the disease. He showed the bladder, uterus, and rectum, which were all involved to some extent in the growth.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on Nov. 18th, the President, Mr. D. H. Goodsall, being in the chair.—Dr. A. Haig read a paper on Diabetes and showed a man, aged thirty years, a diabetic subject, who had gained 5 kilos. in six months under treatment by salicylate, avoidance of meat, and the giving of "Protene" biscuits. Dr. Haig said that there was always an excess of uric acid in the blood, that all the useful drugs in diabetes relieve the circulation of uric acid, that diabetic coma was due to uric acid and was not a part of diabetes, and that all was a result of defective combustion due to a defective capillary circulation. Glucose present was made up partly of a functional remediable and partly of an organic irremediable factor.—Dr. Arthur T. Davies showed two specimens of Œsophageal Carcinoma from men aged respectively fifty and fifty-two years. In one the lower part of the gullet and the outer coat of the aorta were involved and the right lung was tuberculous, as determined microscopically; in the other ulceration extended from the œsophagus through the pleura into the lung. In the case of the latter patient there was a history of difficulty in swallowing for a period of four months.—Mr. W. L. Brown showed a Rectal Slough from a child with rectal prolapse which came away on the tip of the examining finger as a complete ring about 2 cm. in length. There had been bloody stools for six months and there was a tight phimosis.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The second meeting of the session was held in the Medical Library of University College on Nov. 9th, Dr. R. Roxburgh being in the chair.—Mr. Carwardine showed a patient and specimens of Hydatid of the Liver.—Dr. Stack (for Dr. J. E. Shaw) showed some interesting specimens of Brain Tumour.—Dr. Michell Clarke and Mr. Roger Williams spoke on the subject.—Mr. Carwardine showed a specimen of Double Hydro-salpinx.—Mr. Paul Bush showed a portion of a Large Tumour which he had successfully removed from the axilla, which he considered to be tuberculous.—Mr. Morton, Mr. Lace, and Mr. R. Williams commented on the tumour.—Mr. Paul Bush showed a series of cases of Enlarged Bursæ in housemaid's knee.—Mr. Harsant, Mr. Barclay, and Dr. Roxburgh spoke on the subject.—Dr. B. Rogers showed some microscopic specimens of Blood from a case of Leucocythæmia.—Dr. Stack showed a specimen of Aneurysm of the Vena Cava; Professor Fawcett remarked on the specimen.—Dr. H. L. Ormerod read a most instructive paper on a case of Ulcerative Endocarditis.—Dr. Shingleton Smith, Dr. Waldo, Dr. B. Rogers, Dr. Parker, Dr. Symes, Dr. W. C. Swayne, Mr. R. Williams and Dr. F. H. Edgeworth discussed the paper.

MANCHESTER THERAPEUTICAL SOCIETY.—A meeting of this society was held at the Owens College on Nov. 1st, Dr. Leech, the President, being in the chair.—Dr. R. B. Wild read a communication on the Toxic Effects of Boric Acid in which he narrated two cases in which dermatitis and other disagreeable symptoms were produced by the continued administration of boric acid in doses of from 10 to 15 gr. Dr. Wild also related experiments which he had made in order to test the rate of elimination of boric acid by the urine. He found that it was excreted partly as free boric acid and partly as borax. He believed that with diseased kidneys elimination might be very slow and thus favour the onset of toxic symptoms. He thought it was not justifiable to add boric acid to foods in such large quantities as was done sometimes.—A discussion then took place on the Various Forms of Extract of Meat and Similar Preparations, a large number of samples being shown. The general opinion seemed to be that though some of these were readily taken and might serve occasionally as useful stimulants the majority were almost devoid of nutritive properties and that probably the raw meat juice

freshly prepared was more useful than the proprietary preparations.

CHELSEA CLINICAL SOCIETY.—A meeting of this society was held on Nov. 15th, Mr. J. Foster Palmer, President, being in the chair.—Dr. J. B. Ball read a paper on the Indications for Operation in Cases of Adenoid Vegetations of the Naso-pharynx. He recapitulated the main symptoms of the disease, laying stress on those which he considered to furnish indications for operative interference. He strongly disagreed with those who advise operation in every case of adenoids regardless of whether symptoms are present or not, and deprecated the tendency which existed in many quarters to exaggerate the ill effects of these growths. At the same time he insisted on the importance of early operation in cases where operation was indicated. He finally enumerated the symptoms which he believed to indicate an operation. The President, Dr. C. C. Cibbes, Dr. C. A. Morris, Dr. V. Dickinson, Dr. P. White and Dr. D. Vinrace also spoke and Dr. Ball replied.

HULL MEDICAL SOCIETY.—The following have been elected as office-bearers for the session 1898–99:—President: Dr. Alfred Parkin. Vice-Presidents: Dr. Edward O. Daly and Mr. A. Legge Roe. Librarian: Dr. James McNidder. Council: Dr. T. Cameron, Mr. A. G. Francis, Dr. R. Grieve, Dr. E. M. Hainworth, Mr. E. H. Howlett, Dr. David Lowson, Dr. John Merson, and Mr. H. W. Pigeon. Honorary Secretary: Dr. James L. Waters.

NEWPORT MEDICAL SOCIETY.—A meeting of this Society was held on Nov. 2nd, the President, Mr. H. E. Williams, being in the chair. Dr. Paterson (Cardiff) read an interesting paper on the Supra-tonsillar Fossa as a Starting-point of Infection (with lantern slides).—Mr. J. McGinn read notes upon and exhibited a remarkable case of Chronic Hydrocephalus.—Dr. A. G. Thomas showed a case of Double Ankylosis of the Shoulder-joint.

Reviews and Notices of Books.

Atlas of External Diseases of the Eye. By A. MAITLAND RAMSAY, M.D. Glasg., Ophthalmic Surgeon, Glasgow Royal Infirmary; Professor of Ophthalmology, St. Mungo's College, Glasgow; and Lecturer on Eye Diseases, Queen Margaret College, University of Glasgow. With 30 full-page Coloured Plates and 18 full-page Photogravures. Glasgow: James Maclehose and Sons. 1898. Quarto. Price £3 3*s.* net.

THE handsomely illustrated work which has been brought to a happy conclusion by Dr. Ramsay is one of a small class. The great expense involved in its preparation, the delicacy of the artistic work, and the comparatively limited number of purchasers combine to make both author and publisher hesitate before commencing a work of this magnitude. The chief treatises with which it can be compared are those of A. P. Demours ("Traité des Maladies des Yeux," with an atlas of 65 plates, Paris, 1818); of von Ammon, whose well-known and frequently referred to "Klinische Darstellung der Krankheiten des Menschlichen Auges," was published in Berlin in 1847, with 55 plates and 956 figures; the "Iconographie Ophtalmologique" of J. Sichel, with 80 plates, published in Paris between the years 1852–1859; and the "Pathology of the Human Eye," by John Dalrymple, published in London in 1852. All of these works were excellent in their day, Dalrymple's easily taking the lead in the brilliancy of the delineations of the diseases depicted. The original water-colour drawings of his atlas were made by Mr. Kearney and Mr. Leonard from cases occurring in the practice of Mr. Scott and Mr. Dalrymple, and in transferring the outlines to the plates Mr. Dalrymple had the good fortune to obtain the services of an accomplished artist, Mr. W. Bagge, by whose hand the illustrations were coloured. Sichel's "Iconographie" comes next and includes a number of very good chromolithographs touched up by hand. Von Ammon's drawings show less refinement than either of the others, but are yet very generally recognisable and make up for their defects by their number and variety, whilst Demours's drawings are not to be despised. All these works are—or rather were, for they are now out of print—very expensive.

The Atlas of Dr. Ramsay, at a very moderate cost, contrasts favourably with those of Demours, von Ammon, and Sichel, and in many of the drawings quite equals Dalrymple's in artistic delicacy and finish, whilst it has the great advantage of giving in numerous instances photographs of not the disease alone but the whole face of the patient, so that the expression, which is so marked a feature and so characteristic of many ophthalmic diseases, is placed before the reader in a very instructive fashion.

The value of such a work as this depends not only on the fidelity with which nature is copied, but upon the selection of typical cases, and in this respect Dr. Ramsay has exercised a wise discretion, many of the illustrations being excellent examples of the particular disease exhibited; those, for example, of eczema, of nævus of the lid, of rodent ulcer of the lid, of buphthalmos, orbital abscess, tumour of the sphenoid, aneurysm of the orbit, exophthalmic goitre, and proptosis are all good and instructive, and they are all reproductions of photographs. Some, of course, are better than others, and we certainly should not have wasted a full-page plate on a case of lagophthalmos, which, after all, only looks like a boy endeavouring with much effort to wink. The plate showing congenital ptosis with epicanthus is good and saves a world of description. The plates representing epithelioma and chancre might have been selected from better examples, and it would require a very sharp observer to distinguish from the plates the case of muco-purulent conjunctivitis from that of ophthalmia neonatorum; the former might have been omitted to make room for something else. In the smaller drawings representing the eyes alone we miss an example of keratitis punctata, which is capitally represented in Demours's twenty-seventh plate; but the drawings of gumma of the conjunctiva and of lupus of the lid, and those representing lacrymal abscess, pannus scrofulosus, xerophthalmia, pterygium, and various forms of iritis and choroiditis are very accurately pourtrayed. Dr. Ramsay has adopted a clever mode of designating the several diseases, obviating the spoiling of the plates by letterpress, which consists in prefixing to each plate a leaf of tissue paper bearing the name of the disease beneath the level of the drawing which can be seen through it. Each drawing or set of drawings representing a particular disease is accompanied by a short chapter giving the etymology, the synonyms in the English, French, German, and Italian languages, an account of the symptoms and pathology, with in many cases a brief history of the patient from whom the illustration was taken. We would particularly refer in this respect to the chapters on Glaucoma and Exophthalmic Goitre. We congratulate Dr. Ramsay on the completion of his work and regard it as a valuable contribution to British ophthalmological literature. It will prove very useful to al those who are placed at a distance from the larger centres where the advice and assistance of an ophthalmic surgeon can be obtained, and in conjunction with one or other of the treatises which we have recently had occasion to notice will enable all the ordinary and some of the extraordinary forms of the diseases of the eye to be recognised and treated with success by those who have had but little opportunity of studying them.

Gout, its Pathology and Treatment. By A. P. LUFF, M.D., F.R.C.P. Lond. London: Cassell and Co. 1898. Crown 8vo. Pp. 248. Price 5*s.*

THE author of this compact treatise has already done much work in relation to the pathology and causation of gout and we are glad that he has collected his

conclusions and presented the medical world with their practical bearings on the treatment of this common disease. His views are, as is well known, diametrically opposed to those of that energetic writer on uric acid and gout—Dr. Haig—and the reader in want of intellectual exercise will find plenty of occupation in comparing the rival theories of these two authors. The present work is divided into four parts; the first, on the pathology of gout, is mainly a reproduction of Dr. Luff's Goulstonian Lectures on the Chemistry and Pathology of Gout delivered before the Royal College of Physicians of London in 1897. In it he states his reasons for the belief that gout is of renal origin and that lesions of the kidney are an important factor in the production of ostensible gout. The chemistry of gout is fully discussed and Dr. Haig's views come in for a considerable amount of rigid criticism. In the second part, after the etiological factors have been referred to, a brief account of the clinical features of the various forms of gout is given. This portion is extremely condensed and in no way on the same lines as the rest of the work; but, as shown in the title, the clinical aspect of the disease is outside the scope of the present essay. The third part consists of the author's experimental researches into certain points bearing on the treatment of gout. He finds that there is no reason to believe that an acid dyscrasia underlies the gouty condition and that the noxious properties of some wines and beer are not accounted for by the contained acids, ethers, or sugar; he considers that these drinks lead to gout by exercising such an effect on the liver that more glycocine is produced; this body is then converted by the kidneys into uric acid; and if the kidneys are not capable of excretion the uric acid thus formed accumulates in the body. Another important point is that the mineral ash of most vegetables increases the solubility of sodium biurate, while the mineral ash of meat has the opposite result. It further appears that the treatment of gout by alkalies, lithium, piperazine, and salicylates is erroneous. After these original and certainly somewhat startling conclusions the practical treatment is considered in the fourth and concluding section.

Colchicum is recommended and is probably useful in that it diminishes the production of uric acid; it may be given every other night in the form of a pill composed of 1 gr. each of the acetic extract of colchicum and of blue pill and of 2 gr. of euonymin. A mixture of 30 gr. of chloride of ammonium and 15 minims of dilute nitro-hydrochloric acid is also advisable. Full attention is also given to dietetic, spa, and other forms of treatment. The style is clear and concise and the work will, doubtless, appeal to, and be appreciated by, all interested in the numerous problems surrounding the causation and successful treatment of gout.

Uric Acid as a Factor in the Causation of Disease. By ALEXANDER HAIG, M.A., M.D. Oxon., F.R.C.P. Lond. Fourth edition. London: J. & A. Churchill. 1897. Pp. xiii.–698. Price 12*s.* 6*d.*

IT may be conceded that Dr. Haig has done good service in insisting upon the uric acid factor in the causation of certain diseases—notably migraine. Starting from observations on his own case he has shown how migraine can be held in check and reasonably treated. It is the experience of those who have adopted his line of treatment that at least in many cases it is successful. It is probable that uric acid plays a part in the causation of certain other diseases besides migraine and, of course, gout in its various manifestations, though the evidence of this is by no means so decisive. It is, however, very easy to push the uric acid theory of disease to unwarranted excess, and this, in our judgment, Dr. Haig has done. In this fourth edition of his book he has endeavoured to include so many and such various diseases within the uric acid fold that it is difficult to take him seriously. When we proceed to inquire into the solid basis of exact fact upon which many of his propositions rest we find that it is not always so solid or so exact as we have a right to demand. It has been pointed out again and again that Haycraft's method for estimating uric acid, upon which all Dr. Haig's statements and figures are based, is by no means of sufficient accuracy. We have before protested in these columns against the use of the barbarous word "uricacidæmia." We now find the term "collæmia" used as a synonym of uricacidæmia on the assumption that the rise of blood-pressure met with in certain uric acid diseases is due to mechanical capillary obstruction by uric acid salts in the colloid form. No adequate grounds are set forth for the assumption. Dr. Haig is a vegetarian and he is of opinion that much uric acid is introduced into the body as such in certain articles of food, especially meats and their derivatives. The processes by which the estimations have been made are not such as to satisfy an organic chemist. Space fails us even to enumerate all the diseases which the author connects in one way or another with uric acid, much less to criticise his various lines of reasoning. There appears to us to be a considerable amount of assumption and in many cases a somewhat slender basis of indisputable fact. It is indeed to be regretted that by pushing his theories to extremes Dr. Haig tends to discredit the real importance of many of his earlier observations.

Laboratoire Bactériologique de l'Hôpital Grec d'Alexandrie: Recherches Bactériologiques sur la Pathogénie de la Dysenterie et de l'Abcès du Foie d'Égypte. Faites par le Docteur A. P. PETRIDIS, Médecin adjoint au service du Docteur Zancarol et Directeur du Laboratoire Bactériologique. (*Bacteriological Laboratory of the Greek Hospital, Alexandria: Bacteriological Researches on the Pathogeny of the Dysentery and the Abscess of the Liver of Egypt.* By Dr. A. P. PETRIDIS, Assistant Medical Officer to Dr. Zancarol and Director of the Bacteriological Laboratory.) Alexandrie. 1898.

As a result of observations on 9 cases of multiple abscess of the liver in the human subject which were opened, but which were followed by death, on 15 similar cases which recovered and of which a bacteriological examination was made during life, and on 11 other cases in which no bacteriological examination of the blood was made during life (6 of which recovered and 5 died), Dr. Petridis has no hesitation in coming to the conclusion that the endemic dysentery of Egypt is microbic in its origin and that the real cause is not amœbic but streptococcic in character. He finds that by injecting the streptococci separated from these cases directly into the rectum of a cat that he is able to produce in about half of the cases so treated a condition similar in character to dysentery. As bearing out his contention he also gives the following observations: the pus from one of these abscesses in the human subject, taken at the time of operation, almost invariably contains streptococci which may be isolated on cultivation. Sections of the hepatic tissue taken during the operation or after death also contain streptococci or cocci in zooglœa. Blood drawn before the operation always contained streptococci. Similar observations were made in cats submitted to experiment. Abscess of the liver he believes in most cases results from dysentery or other irritation of the intestinal mucous membrane, by which exfoliation of the epithelium is brought about. Amongst the causes of such conditions he includes the entozoa. In every case where an abscess of the liver was produced experimentally in cats the dysenteric condition of the intestinal canal could be demonstrated, but in not a single abscess of the liver of the cat was he able to demonstrate the presence of numerous living amœbæ. Abscess of the liver usually commences as

minute foci of suppuration which gradually run into one another and form a single large abscess. In those cases, however, in which they are far apart these abscesses cannot run together and so may remain "multiple." These opinions, based on so many observations, cannot but carry weight in the discussion concerning the part that streptococci play in determining dysenteric abscess of the liver.

LIBRARY TABLE.

A Manual of Operative Surgery. By LEWIS A. STIMSON, B.A., M.D., Surgeon to the New York, Bellevue, and Hudson-street Hospitals; Professor of Surgery in the University of the City of New York, &c.; and JOHN ROGERS, jun., B.A., M.D., Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons (Columbia College), New York; Surgeon of the Out-patient Staff, Hudson-street Hospital. Third Edition, with 334 Illustrations. London: H. K. Lewis. 1897. Pp. 598. 8vo. Price 12*s.* 6*d.* net.—The first two editions of this book were so well known and appreciated in this country that it would almost suffice to say that this, the third edition, is as good as its predecessors. Ten years have elapsed since the second edition appeared, and so many important changes have taken place in the methods of doing many operations and so many new operations have been introduced, that it was found necessary almost wholly to re-write the book in order to bring it fully up to date. For this purpose Dr. Stimson associated with himself Dr. Rogers, who has had the work of collecting the material and writing the book; but it has all been carried out under Dr. Stimson's supervision. The result is eminently satisfactory, and we find in a volume of just 600 pages all the essential parts of what might very easily have been made to occupy a much larger work. Much space has been saved by excluding from the volume all accounts of the conditions for which the operation may be required. All the common and most of the rarer operations are given and the descriptions, though brief, are sufficient to enable a surgeon to perform any operation if previously unacquainted with it. The special surgery of the eye occupies 50 pages, and gynæcological operations are described in about as many. In our opinion the best chapter in the volume is that devoted to the plastic surgery of the face; it is better than the matter which is to be found in most special treatises on the subject. The whole work is profusely illustrated and can be recommended to the student as clear, concise, and complete. The only fault which we have to find with the book is that the index is not sufficiently full.

Brief Essays on Orthopædic Surgery. By NEWTON M. SHAFFER, M.D., Surgeon-in-chief to the New York Orthopædic Dispensary and Hospital; Clinical Professor of Orthopædic Surgery, University of New York City, &c. New York: D. Appleton and Co. 1898.—This little volume consists of seven articles which have already appeared in some American medical journals at various times during the last few years and their general object is to insist upon the desirability of the existence of orthopædic surgery as a specialty. The author points out that special training in orthopædics is needed to enable a surgeon to obtain the best results in this department and that this can only be obtained at special hospitals or at general hospitals where a special orthopædic department has been established. He argues that a surgeon should give to the instrument-maker the measurements and patterns for the apparatus required in an orthopædic case and that to leave the measurement and fitting to the instrument-maker who cannot appreciate the requirements of the case is only to court failure. Every orthopædic department should have a workshop where the apparatus can be made, and Dr. Shaffer shows that this workshop may easily be made self-supporting by selling the instruments to the patients at cost price. If this be done they obtain the apparatus at a much less cost than from the ordinary instrument-maker. One further point is raised in this book: the author thinks that an orthopædic surgeon should operate only on those cases which require special treatment after the operation and that all other cases should be handed over to the general surgeon.

Where Two Worlds Meet. By ROSA E. MARCH. London: Skeffington and Son. Price 2*s.* 6*d.* net.—This is a collection of thoughtful little essays written in a simple and devotional spirit. The one entitled "Break up your Fallow Ground" was specially written for the sick and would very likely be of considerable service to those of a particular kind of temperament. There is a contemplative side of the religious life as well as an active one.

The Natural History of Digestion. By A. LOCKHART GILLESPIE, M.D., F.R.C.P.Edin. Pp. 427, figs. 48, diagrams 12, charts 23. Price 6*s.* The Contemporary Science Series. Edited by HAVELOCK ELLIS. London: Walter Scott. 1898.—This work gives an account of the processes of digestion both in plants and animals. This in itself is no slight task, but there is more than this in the volume before us, for chapters on metabolism, animal heat, stimulants, and food have been added so as to render the whole more complete. The first chapter contains an interesting *résumé* of the theories held by the ancients on digestion and records the phases which accepted opinion has since gone through, thus carrying the reader up to comparatively recent times. After an interesting description of carnivorous plants the author goes on—in Chapter IV. and those following—to the anatomy and physiology of digestion. This constitutes the bulk of the work and it is done with great ability. Considerable detail has been introduced, especially in small print, and the outcome is a useful source of reference, written in a clear and concise style and well illustrated by figures, diagrams, and charts, which will be welcomed by the medical profession as well as by the lay public for whom the Contemporary Science Series is chiefly intended.

Contributions to Clinical Medicine. By T. MCCALL ANDERSON, M.D.Glasg. Edited by JAMES HINSHELWOOD, M.A., M.D. Glasg. 8vo, cloth. Pp. 415, 28 Illustrations. Edinburgh and London: Young J. Pentland. 1898.—This is a collection of commentaries on cases and short clinical lectures, and is presented to the reader as an epitome of some of the experiences of one who has been a hospital physician and teacher for more than a quarter of a century. Dr. McCall Anderson's name is perhaps more generally known in connexion with diseases of the skin, and the present volume contains some valuable articles dealing with this branch of medicine, such as those on hæmidrosis, Addison's disease, and hydroa æstivale. The "Contributions," some of which have been already published, are arranged under six headings, general diseases coming first, then those of the nervous, the circulatory, the respiratory, the digestive, and the urinary systems. In the course of some remarks on the phenomena of embolism a remarkable case is given in which it appeared probable that a primary hydatid cyst in the heart gave rise to multiple embolism of daughter cysts in the carotids and other branches of the aorta. Another very interesting paper—especially at the present time when the subject of the treatment of tuberculosis is so much to the fore—is that on the Curability of Acute Phthisis (galloping consumption). Altogether these extracts from a physician's case-book are well worth reading and will prove especially attractive to the author's old students who may, perhaps, as he suggests, recognise some familiar friends among the recorded cases.

JOURNALS AND REVIEWS.

Journal of Experimental Medicine (New York and London: D. Appleton and Co.).—In No. 3 of the third volume the first two papers deal with a case of Teratoma of the Abdominal Cavity recorded by Dr. Douglas W. Montgomery, from a study of which Dr. Montgomery and Dr. Lewellys F. Barker are of the opinion that they have a definite fact in support of Cohnheim's vestigial doctrine regarding the origin of tumours in general. Dr. C. A. Herter contributes a Study of Fat with a special Reference to the Production of Serous Atrophy of Fat, from which he concludes that prolonged fat starvation leads to the entire disappearance of fat from the adipose tissues and that this form of fat atrophy is essentially of the same type as that found in the epicardial and perirenal fat in the human subject as the result of any wasting disease. He also notes that the lecithins of the brain and the fat of the liver are not materially reduced by fat starvation; that carbohydrate food or carbohydrate and proteid constituents of milk in considerable quantities may largely take the place of fatty food in preventing serous fat atrophy of the subcutaneous fat (fat starvation), but this may cause a very imperfect absorption of the salts of phosphoric acid from the intestine. Dr. Thomas R. Brown, in a paper on Studies on Trichinosis with Special Reference to the Increase of the Eosinophilic Cells in the Blood and Muscle, the Origin of these Cells and their Diagnostic Importance, maintains that there is a marked increase of these cells under the above-mentioned conditions; that the muscle fibres are split longitudinally and undergo a characteristic degeneration; and that near these degenerated muscle masses he has seen a few of these cells accumulated. He holds that the increase in the eosinophiles may in certain instances take place in the muscles by direct transition from the neutrophiles, as here he finds various transitional stages between the two forms. Dr. Mark Wyman Richardson draws attention to the fact that the typhoid bacillus in the urine of typhoid fever patients occurs in a proportion of about 25 per cent. in 38 cases examined in large numbers and in practically pure culture; that they occur more frequently in the later stages of the disease and especially where albuminuria is present. The importance of this observation from the point of view of preventive medicine can scarcely be over-estimated. The other papers in this number are one on the Branched Form of the Bacillus Tuberculosis in Sputum, by Dr. Charles F. Craig; another on the Effects upon the Blood of the Tufnell Method and the Calcium Salts in the Treatment of Aortic Aneurysm, by Dr. Alonzo Englebert Taylor; and Experiments on the Application of the Roentgen Rays to the Study of Anatomy, by Ernest Amory Codman, M.D. In numbers 4 and 5, Volume III., of the same journal Dr. W. T. Councilman, in an article on Acute Interstitial Nephritis, draws attention to the important part that Unna's plasma cells play in forming the cellular foci which occur in this condition during the course of diphtheria, scarlet fever, and similar conditions. These are not due necessarily to the local action of the bacteria, though in three cases plasma cells were found in the interstitial tissue in definite diseases of the kidney; but as he points out in these cases they were not found in connexion with the lesions produced directly by the bacteria but in the periphery of the purulent foci. Other papers comprise a Case of Mycetoma (Madura Foot), by James H. Wright; Pseudo-Tuberculosis Hominis Streptothricha, by Simon Flexner, M.D.; and a Comparative Study of Bovine Tubercle Bacilli and of Human Bacilli from Sputum, by Dr. Theobald Smith. This last paper is in many ways extremely suggestive; but the author does not take up any definite thesis, though he insists, and very rightly so, that from his experiments it is desirable to study the tubercle bacillus in its various aspects in order to determine the relation of the sputum bacillus to the bovine bacillus as regards virulence, and that it is especially necessary to do so in connexion with the intestinal tuberculosis met with in children. It will be gathered, however, that Dr. Smith holds to the opinion that there is a marked difference in virulence between the tubercle bacilli of cattle and those derived from sputum of the human subject. Dr. William Hallock Park and Dr. James P. Atkinson contribute a paper on the Relation of the Toxicity of Diphtheria Toxin to its Neutralising Value upon Antitoxin at Different Stages in the Growth of Culture. Whilst agreeing generally with Ehrlich as to the composition of diphtheria toxin and as to the varying neutralising value of a minimal fatal dose of toxin, they hold that epitoxoids are not necessarily formed, as suggested in Ehrlich's original paper, and that it is possible to obtain a toxin of a known and suitable neutralising value by using the same bacillus—not necessarily the same broth—but growing the culture at the same temperature for a definite period of time. They think that this will give a better standard than, or at any rate an equally good standard as, Ehrlich's standard antitoxin. Dr. T. M. Cheeseman and Dr. S. J. Meltzer, in a most interesting paper on the Inoculation of Bacteria into the Spleen, maintain that cultures of bacillus coli communis, bacillus typhosus and staphylococcus pyogenes aureus, when injected into the tissue of the normal spleen, soon disappear from that organ and, indeed, from the normal body generally. When, however, the vessels have been previously tied these micro-organisms multiply rapidly in the spleen, although those which escape into the circulation are soon destroyed. It is only when lesions have been made in the spleen or any other organ or subcutaneous tissue that these organisms can multiply, and those escaping, as a rule, are rapidly destroyed as they make their way into the blood.

Birmingham Medical Review.—In a paper in the November number on the Treatment of Chronic Disease Dr. Alfred Carter recommends (1) the formation of clinical laboratories where chemical and physiological investigations of cases can be conducted by trained assistants at a minimum cost; and (2) the establishment of fully equipped sanatoria available for the treatment of chronic disease. Under the heading of "A Modern Social Problem" Mr. Henry May, late medical officer of health for Aston Manor, calls attention to the reduction in the birth-rate and marriage-rate and to the "modern undercurrent towards restraint of fertility."

Journal of Pathology and Bacteriology.—In the third number of Volume V., October, 1898, the following papers appear:—Bacillus Coli Capsulatus: a Study in Virulence, by Dr. Louis Jenner; A New Micrococcus, with a Note on the Bacteriology of Lymphadenoma, by Dr. John Hill Abram; Mouse Favus, by Dr. John Hill Abram; On a Method of Estimating the Production of Acid by Bacteria in Nutritive Media, by Dr. William Hanna; The Durability of Passive Diphtheria Immunity, by Mr. Wm. Bullock; A Contribution to the Study of Passive Immunity, by Dr. J. W. W. Stephens and Dr. W. Myers; The Condition of the Salivary Glands and Pancreas in Chronic Tuberculosis, by Dr. Vincent Dormer Harris; Experiments to Determine whether Sewer Air will raise the Toxicity of Lowly Virulent Diphtheria Bacilli, by Mr. Samuel G. Shattock; Molluscum Contagiosum in Two Mated Bunting Sparrows, by Mr. Samuel G. Shattock; Supernumerary Dorsal Fin in a Trout, by Mr. C. G. Seligmann; The Changes Occurring in the Blood of Dogs after Removal of the Thyroid, by Dr. A. G. Levy; Note on the Presence of Iron in the Liver and Spleen in Two Cases of Malaria, by Dr. J. Everett Dutton; On the Effect of Injecting Dilute Sulphuric Acid into the Common Bile Duct, by Mr. Wakelin Barratt; The Effect of Marchi's Fluid on Nervous

Tissue that has Undergone Post-mortem Change, by Dr. Frederick E. Batten; The Bone Marrow of Cancer Patients: a Reply to Dr. Francis Villy's First Paper, by Dr. Herbert Snow; A Case of Deciduoma Malignum, by Dr. J. K. Kelly and Dr. John H. Teacher; Laboratory Notes: A Simple Method of Restoring the "Spiking" of the Bacillus Anthracis in Gelatine Stab Cultures and A Modification of Pitfield's Method for Staining Flagella, by Mr. Richard Muir. This number contains much matter of interest alike to the bacteriologist and pathologist and to the physician and surgeon.

Revista Medica de S. Paulo.—We have received several numbers of this Brazilian monthly medical journal, which made its first appearance in the early months of the present year. The opening article of the March number is a Portuguese translation of an address delivered in Italian by Professor Sanarelli on his first experiments on the employment of serum as a remedy and prophylactic against yellow fever. The June number has an illustrated description by Dr. Francisco Fajardo of a hæmatozoon found in beri-beri. The September number contains papers on Yellow Fever by Dr. Vital Brazil, Dr. Victor Godinho, and Dr. Benigno Ribeiro. Dr. Adolpho Lutz has an interesting series of articles on Intestinal Worms and the Diseases produced by Flies in San Paulo. The editors of the journal, Dr. Victor Godinho and Dr. Arthur Mendonça, have made an excellent beginning.

Mercy and Truth.—One of the articles in the November number is Dr. Carr's account of a week's hard riding in Persia, being an urgent journey from Julfa to Kirman, in order to attend the late Rev. H. Carless, who had been taken seriously ill at the latter place.

THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS.

The Question of the Compulsory Notification of Phthisis.

The third and last Harben Lecture on Administrative Measures for the Control of Tuberculosis was delivered by Sir Richard Thorne, K.C.B., F.R.S., at the Examination Hall of the Conjoint Board, Victoria Embankment, on Nov. 16th, the subject discussed being the question of the compulsory notification of phthisis.

The lecturer pointed out that a certain number of sanitary authorities had applied to the Local Government Board for their statutory approval to add phthisis to the list of the infectious diseases which are now included in the Infectious Disease (Notification) Act, 1889, but that this approval had never yet been given. He agreed with the action of the central authority, and he pointed out that there was no such similarity between phthisis and the diseases now notifiable—namely, small-pox, scarlet fever, diphtheria, &c.—as would, in his opinion, justify compliance with the demand made. The Notification Act was passed in order to enable authorities to control the movements of persons who for a few weeks only of their lives were in a state which constituted a danger to the public health, such persons being, by reason of a temporary and acute illness unfit to follow their usual avocations or to mingle with others. In the case of phthisis, however, any corresponding sanitary control would often have to be exercised for a series of years, during which time the phthisical persons were not only quite capable of continuing in their employment, but it was often absolutely essential that they should be able to maintain themselves and at times a family as well. The Act was never passed to enable such persons to be subjected to restrictions in the manner intended to apply to the acute infectious fevers. He referred in some detail to the notification of phthisis in New York City because it was often held out as an example to be followed; but he showed that the New York provision has hitherto been most partial in its application, that its operations were in the main limited to persons living in tenement- and lodging-houses, and that apart from this no sanitary control was exercised except with the actual or tacit consent of the medical practitioner in attendance on the patient. Even the statistical results which were quoted in favour of the New York practice showed that the diminution in the phthisis death-rate was in full operation for years before the notification system was established. This was doubtless to a large extent brought about by the same administrative measures which in this country had already led to a saving of no less than 60 lives out of every 100 which at many age-periods were formerly sacrificed to this disease. Instances were then given to show what would certainly follow if the stringency of our laws as to infectious disease were made applicable to this disease. The system of inspection by sanitary officials would lead to publicity and to loss of employment, with the consequent deprivation of food and comforts which are essential to the cure of the disease in its incipient stages, while it would hinder people from seeking medical advice at a time when this was most useful, and thus would defeat the main object in view. It was next pointed out that the same proposal had come before the Academy of Medicine in Paris and that on a report from a committee of that body the system of compulsory notification had been rejected on the ground that it was likely to do more harm than good. The conclusion at which the lecturer arrived did not, however, justify inaction as regards a disease which still caused some 40,000 deaths every year in England and Wales and which is largely spread by means of highly infective sputa which when dried were carried about as dust. The duty of giving to individuals advice as to dealing with these sputa which was likely to be followed devolved, in his opinion, on the medical practitioners whose counsel and help were voluntarily sought by the phthisical patients; and the lecturer appealed to all physicians, whether in hospital practice or in private practice, to give this advice in some such simple form as is to be found in the leaflets now distributed to patients visiting certain of the chest hospitals of the metropolis. Any action by way of notification should, for the present at least, be under a voluntary and not a compulsory system, and such action might well be supplemented by the construction out of public funds of sanatoria for the temporary isolation of persons suffering from this infectious disease, who during their sojourn in these establishments would acquire habits of dealing with infectious materials which would tend to prevent that spread of infection now so largely due to the want of simple and inexpensive precautions. In conclusion, it was pointed out that the success attained under our English system of public health is largely due to the fact that the leaders of that system have been content to lead, and have avoided pressing so far ahead of public opinion as to alienate that support on which success is most dependent.

East Suburban Medical Protection and Medico-Ethical Society, Limited.—This society is progressing and since the last general meeting in October reported in The Lancet it has elected about 30 new members. Two council meetings have been held and numerous matters of interest discussed. Action has been taken in 1 gross case of unprofessional conduct and the matter dealt with by the practitioners' licensing body upon evidence laid before it by the society. The Plaistow Maternity Home has sent a favourable reply to the requests of the society for the abolition of midwifery fees by the home, and the representation of the local medical practitioners upon the committee of the home is still under discussion. The debt collecting department has been still further made use of by the members and with success. Sub-committees have been appointed to consider the working of medical aid societies, to arrange for the holding of clinical and social meetings, and to deal with other subjects. Active local branches have been formed at Manor Park, Leyton, Canning Town, and Plaistow, and other branches are in course of formation in other districts. The local branches have also appointed sub-committees to collect evidence and otherwise consider the question of the abuses in local medical charities. The next executive council meeting is to be held on Thursday, Dec. 8th, when the council will proceed to consider *inter alia* the nominations of the officers of the society for election at the general meeting in January. A nomination paper and notice will shortly be sent to all members and they are reminded to return them duly filled in at least two days before the meeting or they will be disqualified.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 26, 1898.

As was to be expected, the new Vaccination Order, with which we recently [1] dealt at considerable length, has given rise to much discussion amongst public vaccinators. The Association of Public Vaccinators has had a largely attended meeting [2] at which it was agreed to forward to all its members certain recommendations regarding fees. The minimum fees for successful vaccination and revaccination are, it is advised by the Association, to be accepted as in the Order, but the preliminary minimum fee of one shilling (Article 3 (1) (*a*) of the Order) is objected to as insufficient, owing to the facts that (as we have already pointed out) this is not really a fee on the birth-rate and that many a domiciliary visit may not result in a vaccination, in which case, of course, the vaccination fee itself will not be payable. Public vaccinators are also recommended to see "that mileage be allowed for at the rate of one shilling per mile, or part of a mile, one way, for distances greater than two miles from the public vaccinator's residence for each statutory visit paid." The public vaccinators of the Bridgwater Union have gone a step further and have petitioned their board for a mileage allowance for all distances over one mile, instead of over two miles as in the above scheme. The purpose of the recommendation of the Association of Public Vaccinators is to ensure that the payment shall vary with the work and that the public vaccinator of a rural district shall have due consideration given to the fact that his duties involve a greater expenditure of time and money than do the duties of a vaccinator in a town district. The object is admirable and we must assume that before issuing the recommendation the Association has satisfied itself that the method proposed for achieving it is feasible. Article 3 (1) of the Order states that the contracts for public vaccinators "shall be made in the form set out in the first schedule hereto, with such modification, if any, as the guardians and the contractor shall, with our approval, adopt." The form contains no blank space to be filled up for mileage fees and no mention of such fees is made in any part of the Order, but the Association may have ascertained that the Local Government Board would be willing to look on such payments as additions to the minimum, and to sanction the necessary modification in the form of contract. We judge the Board's own view to be that the fees for visits and vaccinations should be so fixed in each district as to cover all incidental charges and loss of time, and that it matters little by which method the object is attained.

We have pointed out that the new Order gives no security of tenure to public vaccinators, though it gives very considerable protection to vaccination officers. The evils of the existing insecurity, which will be imported into the new system, seem likely to receive immediate exemplification at Cardiff. The board of guardians there have decided to discharge their present public vaccinators and to appoint in their place one medical man debarred from all other work. Now, if the Order had provided that in future no public vaccinator could either directly or indirectly be dismissed from office without the approval of the Whitehall Department we should have hailed with the greatest satisfaction the prospect of the inauguration of a system of exclusive service, provided such a system were to be introduced without injustice to the large body of medical men already engaged in vaccination work throughout England and Wales. But at present it would be simply illegal for boards of guardians to give anything in the way of compensation or pension to public vaccinators, though their dismissal were for the public benefit as part of an arrangement for the introduction of a better system. To carry out a scheme therefore which involves the dismissal of old servants without consideration would be to inflict great hardship. Still less can it be recommended from the point of view of the men who would take the place of the dismissed public vaccinators. They would have to give up and refrain from all other medical work. They might go on in the vaccination service until middle life or old age, but at any moment, as the result of some whim on the part of the guardians, or on some trumped-up charge of neglect of duty, or through some local election fought out on the question of vaccination, they might receive four weeks' notice that their services were henceforth to be dispensed with, and, probably burdened with the cares and responsibilities of a family, would have to endeavour to find some new employment and to make a fresh start in medical life, handicapped by the fact that their theoretical knowledge of medicine and surgery had long been rusty, and that their experience in treatment had been confined to the rare cases in which vaccinated patients had required a visit or two extra following on their vaccination. We can conceive of no department of medical work in which reasonable protection against dismissal would be more necessary than in a whole-time public vaccination service. The injustice and practical cruelty which have not infrequently been experienced owing to this same want of protection in the public health service are well known. But likely as sanitary work is to be subjected to unfair and capricious local control, vaccination work is in even a worse position and for a medical man to determine to devote his life to an office so precarious would be indicative rather of foolhardiness than of courage.

We do not for a moment deny that a whole-time vaccination service, established under proper conditions, would be a public and a professional benefit. It would give to children and parents the advantage of the highest possible degree of skill and experience—a concentration of thought and attention in all that relates to the practice of vaccination—and it would tend to preserve good relationships between public officials and private practitioners. But the medical profession has already abundantly sacrificed itself, and has already borne sufficient obloquy and abuse, in its determination to protect the population against anti-vaccinationist folly and to succour children against

[1] THE LANCET, Nov. 5th, 1898, pp. 1210-12.
[2] THE LANCET, Nov. 12th, 1898, p. 1293.

the results of parental ignorance and self-conceit. It is out of the question to expect that if whole-time public vaccinatorships were advertised all over the country to-morrow without a provision for security of tenure the *élite* of the profession would be induced to apply for them. The first step towards the establishment of a proper system is to make it certain that the men appointed shall not be liable to be made the plaything of local feeling, or the victims of prejudiced malevolence. Until reasonable protection is obtained the idea of such a service must be put aside as alike unworthy of the profession and hurtful to the public interest, for it is obviously in the public interest that vaccinatorships should be so conditioned as to attract a thoroughly satisfactory class of applicants. Under existing conditions medical men cannot safely risk more than a part of their time in employment so precarious, and, indeed, the country is to be congratulated on the fact that the medical practitioners who already hold vaccination appointments are so well qualified to fill them, most of them having entered on their work at a time when communities were less exposed to the venom and passion of anti-vaccination crusades. In certain respects the new Order makes an improvement in the position both of public vaccinators and of vaccination officers—a fact on which the Local Government Board are to be heartily congratulated. And those who have experienced the recent evil times have a right to expect that they shall not be deprived of office when its conditions are being more or less ameliorated. But whatever becomes of the proposals for whole-time appointments the official vaccinators throughout the country ought to make a strenuous effort to secure such protection against disturbance as already obtains in some other branches of the public service.

THE Royal College of Surgeons of Edinburgh have presented a memorial to Lord LANSDOWNE regarding the army medical service to which Her Majesty's Secretary of State for War has furnished a very considerate reply. These documents were published in full in THE LANCET of Nov. 12th, but it may be well to recapitulate very succinctly their salient points. The College gratefully acknowledge the interest evinced by Lord LANSDOWNE in the well-being of the service by the constitution of a Royal Army Medical Corps and other beneficial changes; they recognise the importance to the efficiency of the army of having a medical service fully manned and equipped by the best men sent out from the medical colleges and universities and are desirous of encouraging their Licentiates to enter the army. But they point out that certain changes and modifications are still required and might, they think, be advantageously made in the regulations for admission to that service. Scotchmen are an eminently level-headed, practical race and some of the best and most valuable public servants in the world have hailed from the other side of the border, therefore anything which Scotland has to say is always well worth listening to and considering.

The memorial, very pertinently we think, calls attention to the fact that since 1892, by order of the General Medical Council, the course of professional education has been extended to five years, with the recommendation that the fifth year should be devoted to clinical work. The result of this has practically been that the first three years are now devoted to the study of subjects which are the necessary basis of, but which are nevertheless more or less introductory to, medical and surgical science, leaving the last two years to be devoted to clinical work in hospitals and the acquirement of an applied and practical knowledge of the work and duties which have to be discharged as soon as young men are professionally qualified to practise. In the army regulations for the competitive entrance examination too much importance in the opinion of the memorialists is attached to elementary subjects and too little to the practical and clinical work which now occupy the latter years of professional study. Intending candidates for the army competitive examination—who have, it must be remembered, been subjected to a thorough and objective kind of examination on these subjects and have already qualified themselves for the active duties of their profession—are deterred from competing for the army because it either necessitates a return to elementary studies or recourse to a "crammer" to renew and refurbish that kind of knowledge which had been acquired in the earlier stages of their curriculum, whereas the subjects with which the intending candidate has been mainly concerned during the later stages of his career do not occupy the position in the army examination which in the opinion of the Royal College of Surgeons of Edinburgh they should; and they proceed to indicate the direction and lines on which the regulations could in this respect be very advantageously amended. We are very glad to notice, by the way, that the authorities of the College cordially approve of the intimation to medical candidates for the army that they may be rejected for bad spelling or composition. Speaking generally, we recognise the force and wisdom of their reasoning and so, apparently, does Lord LANSDOWNE, although he does not at the present moment consider it advisable to make any change in the subjects prescribed for examination. That a change in this direction will soon be made, however, we have no doubt.

As regards "study leave" for officers of the Royal Army Medical Corps and the constitution of the Examining Board—the other matters alluded to in the College memorial—we think the reply of the War Office is couched in a reasonable and conciliatory spirit. About the importance of "study leave" there cannot be two opinions. Lord LANSDOWNE fully sympathises with the memorialists and has already given his sanction to the grant of leave for the purpose. Owing, however, to the unusually severe demands on the medical service at the present time and to its being so much below its normal establishment it ha not yet been possible to give full effect to this privilege. We are bound in common fairness to say that Lord LANSDOWNE has, we believe, done his best for the army medical service, that he has shown himself well affected towards it, and that, as now constituted, that service merits and should attract the attention of young medical men, offering them, as it does, a good and promising career.

THE *Liverpool Daily Post* recently reported the hearing of a case by the Bootle magistrates in which the vice of drunkenness among women, and its consequences, was

illustrated. It was that of CATHERINE HUGHES, who was charged with neglecting her child. The charge was brought by Mr. A. CLEAVER on behalf of the Liverpool Society for the Prevention of Cruelty to Children. The evidence showed that the woman was almost constantly in a state of drunkenness. "She was drinking all day on Monday, and in the evening she was so drunk that she was not even able to arrange the bed that was made up on the floor. A neighbour had to do it for her, and she then lay down with the child, which was subsequently found suffocated." A charge of manslaughter was first made, but was afterwards changed for one of neglect. The bench convicted the woman and sent her to gaol for six months. She had been under the observation of the society for two years. She had been fifty-five times before the court and on four previous occasions she had been charged with neglect of children. The child just suffocated was the only one left in her charge.

We direct attention to this case both for its own sake and because it graphically illustrates the bearing of the drunkenness of women on the domestic life of the nation and especially on the care of children. The woman on one occasion could not make her bed because she was so drunk and on the death of her child she was "in such a state" that she fell over the dead body. It needs little imagination to conceive what chance of care and proper feeding a child in such a home has. As a matter of fact, the law had removed the other children from her care and stepped into the place of the parent. To afford even obtuse people a clearer view of the home of a drunken woman we may give a short account of a visit paid to it by Inspector WILLIAMS, who had been watching the prisoner for the Liverpool Society for the Prevention of Cruelty to Children. Since 1896 "Mrs. HUGHES occupied the back room, which was practically destitute of furniture, with the exception of a table, a basket, and a shakedown on the floor, while the windows were broken and filled up with old sacking. The apartment was in a filthy condition, and on that occasion the woman was sitting on the basket helplessly drunk with the baby in her arms. ..... He spoke strongly and warned her. He returned about a week afterwards and again found her under the influence of drink." Can anything be more vivid or call more loudly for the attention of the State and of the municipal authorities? Here was the chance of every accident—such as fire, falls, filth. Here was the certainty of improper food. How could wholesome milk be forthcoming when so large a proportion of the income was spent on drink and in producing maternal incapacity? In the end this particular child died—doubtless was killed—before the State came to its assistance. In the case of the other children the conditions were so shocking that the State had intervened and assumed parental responsibility. What do the advocates of freedom as against sobriety say to a case like this? They say, of course, that it is an isolated case. But is it really so isolated as they contend? There is far too good reason to believe that it is not so. The drunkenness of women is forced upon our attention in every newspaper and in passing every public-house. Old men say that there was nothing in their younger days to correspond with the present unblushing use of public-houses by women, who seem to vie with men in their visits. We need not labour the proofs of an evil so obvious. But the case before us shows us the meaning and the result of such habits in women. As long as the woman keeps sober and "at home" there is a chance for that home. Even if her husband has a tendency to alcoholism her presence and the comfort of his house under her care is a restraining influence for him. But if she takes to drinking and the public-house the case is well-nigh hopeless and in a degree it will approach to that of CATHERINE HUGHES. The State cannot escape responsibility. If it is not to accept the parental relation to the children of drunken parents in a very large number of cases it will have to consider what help it can give to weak parents against an influence which experience shows to be well-nigh irresistible and which the law has in past times too little restrained. Medical men, perhaps, of all others, have the best means of knowing the urgency of this evil of the drunkenness of parents and are most entitled—are, indeed, bound—to make it clear to the public mind.

In connexion with the above remarks we are glad to note that at a recent conference on public health in Manchester Dr. ASHBY, whose authority on the subject will be admitted, has directed attention to the rate of mortality amongst the children of the lower classes. In Manchester it is very serious. Dr. ASHBY is physician to a children's hospital with a dispensary department in Manchester. Of 10,000 cases admitted into this institution 4000 were those of children under ten years of age. Of the deaths, 85·5 per cent. were those of children under two. Dr. ASHBY says that the death-rate of children in Norway and in the rural parts of England is at the rate of 100 per 1000 births, while in Manchester it is at the rate of 203 per 1000, and in some of the congested districts, where poverty, drunkenness, and vice abound, it amounts to 300 and even 500 per 1000—something like one half of the infants born dying before attaining the age of one year. This is a scandal to the municipal authorities and to the State. As a profession we cannot be too careful to expose it and to wipe our hands of all responsibility for it. Dr. ASHBY has done his part and he attributes this infanticide to artificial foods, bad milk, and infant life insurance. Very many of the children who die prematurely are insured. Of 155 who died 105 were insured, and in about one-fifth of the insured cases the payment was made wholly or in part in drink by clubs in public-houses.

THE subject of the appointment of county medical officers of health which has been raised from time to time is once again under discussion. It is now ten years since county councils were constituted by Act of Parliament and since they received statutory power to appoint and pay county medical officers of health, and yet only 16 out of 51 administrative counties have availed themselves of this power. Many county councils complain somewhat bitterly that their sanitary functions are few and far between and that if Parliament had passed the Local Government Act, 1888, in the form in which the Bill was originally drawn up there would then have been good grounds for the appointment in all administrative counties of a medical officer of health. There is truth in this contention, but it is a somewhat curious fact that some of the most frequent complaints which county councils make as to the

failure of local district councils within their areas to perform their statutory duties in matters relating to public health are concerned with duties the performance of which has not been made obligatory; and yet the county councils themselves fail in precisely the same way, for the appointment of county medical officers of health has been made a statutory duty but not a statutory obligation.

Thus, county councils are empowered to make "representations" to the Local Government Board as to default on the part of the local councils, and a very frequent cause of complaint at one time had to do with the failure of the local authority to provide means of isolation for infectious patients. But the local authority stands in precisely the same position as regards hospital provision as does a county council in the matter of a medical officer of health. In both cases statutory provision has been made as to a matter that is an obvious duty in the interests of the public; but in neither case has that duty been imposed as a matter of absolute obligation. Another somewhat common ground for making a "representation" is concerned with the failure of local authorities to deal efficiently with the removal of refuse and the excreta of the population, and appeals are made by county councils that the Local Government Board shall by order require this matter to be dealt with by the local authority instead of its being left to owners and occupiers. But this again is a matter which apart from the issue of such an order is left to the discretion of the local authority. Indeed, it seems strange that county councils who are so alive to the failure of the authorities within their jurisdiction in matters concerning which they have no definite obligation should be so blind to their own failure in precisely the same direction.

Whilst, however, we point to such activity of county councils in making complaints, it is a matter of general experience that in those counties where no health officers have been appointed there is an extraordinary laxity in matters relating to the public health. We might place, for example, at opposite poles some of our northern administrative counties such as Lancashire, Durham, and the West Riding, where county health officers have been appointed, and Somerset, Devon, and Cornwall where no such officers have been appointed. From the former have come well-formulated representations based on the results of an inspection of the sanitary circumstances of the districts within the counties, and these representations have always received the attention of the central authority, with the result that great gain has been effected and that the public have benefited. From counties like those in the latter group there have, we believe, been some querulous complaints based upon something that a local district health officer has written to his own council, or on something which a compiler of reports has summarised for the county council; and so far as we know no action beyond the writing of a few letters has ever resulted. Indeed, it is difficult to conceive how the matter could well have been otherwise, for it is hardly likely that a Government department would support the views or opinions of a county council which, for the purposes of economy, has never taken the means to ascertain for itself the facts about which it makes complaint. When such county councils act up to the powers already conferred upon them, then it will be time enough for them to ask for further powers.

Since the passing of the Local Government Act of 1888 another Act has been passed enabling county councils themselves to intervene in the matter of the erection, for combined areas, of hospitals for infectious diseases, and a very strong indication has been given to county councils in this Act to the effect that they are not deemed competent to perform their sanitary functions in this respect, at least, until they have appointed a medical officer of health, their intervention being practically limited to the receipt of a report from their medical officer of health on the subject. But even this strong hint has been largely ignored; and county councils still refrain from undertaking this elementary step in the direction of efficient sanitary administration, although a few have tried to get out of the difficulty by paying some medical practitioner to act as their medical officer of health for certain odd purposes, the officer having a small retaining fee and being at times called on for a report on some special subject.

The latter class of officer has, we need hardly point ont, absolutely no weight in the county; his intervention is often resented by the local medical officers of health, and the counties where such an arrangement has been made are practically in the same position as those where it has not been thought worth while to make any appointment to the office. But when a county health officer has been appointed at a salary which justifies the demand for his whole services for county purposes the matter is quite different. Such an officer is often sought out by the district health officer to give the weight of his county and independent influence in the furtherance of an object about which there are small local difficulties and jealousies which make the local officer practically helpless. Such county health officers, again, can take cognisance of a number of matters which affect multiple local districts but which the local health officers can only deal with up to the boundaries of their respective districts, or cannot deal with at all because they involve areas over which they have no control. In short, properly appointed county health officers have already shown that it is a distinct advantage to the public that appointments such as theirs should be generally made, and in the face of the facts that are patent to those who know what has been done no real object is gained when chairmen of certain county councils declare that it is nugatory to make these appointments until more sanitary duties are devolved by statute on the counties. The truth is that some of the county health officers have to do already more than they can. In the West Riding of Yorkshire, for example, it has been found necessary to hand over the question of river pollution, which was formerly dealt with by the county medical officer of health, to an entirely independent officer.

Now that this subject has once more been raised it is to be hoped that proper consideration will be given to it. But it is not a mere appointment that is wanted: the post must be properly constituted. Parliament has already decided that a county health officer must have special statutory qualifications; it is equally important that he should receive an emolument that will give him the necessary status of a county official. This requirement is in some cases being ignored. Thus, when a sum of £500 a year is bestowed on

such an officer, one of two things must necessarily arise. Either the officer cannot, on such a salary, maintain for himself the position which is necessary to his proper influence, or else he will at the first opportunity use his appointment as a means of securing another one which is more adequately remunerated. In other words, just when he has acquired the local knowledge and experience necessary to the proper performance of his duties he will resign and the county will be handed over to a new official who will have to pass through the same training as his predecessor before he can attain the same position of usefulness and influence.

Annotations.

"Ne quid nimis."

THE ACCIDENT TO THE PRINCE OF WALES.

IT is with much satisfaction we are enabled to inform our readers that His Royal Highness the Prince of Wales has now made an excellent and, we may really say, complete recovery from the severe accident which he met with in July last, and after the interval which has elapsed of more than four months the cure may be reasonably considered permanent. It will be remembered that while descending a spiral staircase the Prince missed his footing and the extreme effort which he then made to recover his balance caused a rupture of the insertion of the left quadriceps extensor muscle which tore away with it at the same time the upper portion of the patella. At present the nature of the union which has taken place leaves little or nothing to be desired. The fragments of bone were separated by a considerable interval which gradually became reduced and the gap is now completely filled with strong fibrous material which shows no sign of stretching and has throughout been carefully prevented from yielding. Massage of the limb and passive movement of the joint were begun at a very early stage and have been followed by the happiest results. The knee readily bends to considerably more than a right angle and the power of active extension at the joint is very good indeed. The Prince can readily go up and down stairs, and can walk with ease and comfort and with a scarcely perceptible halt which is, moreover, only due to the slight embarrassment to the joint movement caused by the light splint which he is wearing and will continue to wear for a few weeks longer as a matter of precaution. So far as the injured limb is concerned His Royal Highness will be able to use it in all his many occupations as well as he did before he met with an accident which is not infrequently followed, as we know, by serious consequences to the usefulness of the extremity.

THE FEEDING OF OUR SCHOOLBOYS.

THE question of the feeding and health of boys in connexion with the public and other large schools in this country has of late been occupying a good deal of attention. It is, of course, very difficult to get at the exact truth in a matter of this kind, but there cannot be a doubt that complaints about school dietary are very common. From inquiries we have instituted we have arrived at the conclusion that these complaints as to the quantity, quality, variety, or cooking of the food supplied at such schools are too numerous for them all to be considered unreasonable or unfounded, nor are we satisfied that, in point of time, the daily meals are always as well distributed as they might be. What is strongly corroborative of there being something faulty in the system is the fact that boys very frequently spend their money in the purchase of such food as bread-and-cheese and bread-and-butter, and not in the various small luxuries that commonly prove so tempting to schoolboys. It would surely be easy to ascertain by inquiry as to how the boys actually spent their pocket-money whether this were the fact or not. If it be spent in the purchase of ordinary articles of diet the inference would be that they had to supplement their school dietary to make it sufficient. But it is not after all, we believe, so much in respect of the quantity as in the cooking and carving of the meat supplied at schools that there is legitimate ground for complaint. The cooking is commonly bad or uncertain in character and the carving is also such as to lead to a wasteful and unequal distribution of the food supplied. The whole subject is well worthy of careful inquiry and practical consideration on the part of schoolmasters. For years the dietary and cooking for the soldiers of our army were badly and uneconomically managed until they were practically taken up and reforms were introduced with very great advantage to the soldier; and similar results would probably follow in the case of public schools if the systems of dietary and cooking were made the subject of investigation by men practically acquainted with the matter.

INSTRUCTION IN TROPICAL MEDICINE.

LAST week we briefly referred to some of the objections which might be raised against the scheme of establishing a School of Tropical Medicine at the Branch Hospital of the Seamen's Hospital at the Royal Albert Dock. The committee who are at present conducting the preliminary arrangements propose to concentrate the teaching material at this branch, meaning thereby keeping the cases at the branch instead of sending them to the parent hospital at Greenwich. The Branch Hospital was built as an emergency hospital and was never intended for the reception of any cases which could be allowed to cross the river. Last week we instanced the futility of such a proposal by pointing out that in 25 years only 50 cases of "tropical abscess" had been received at the hospital and on further studying the "tables of cases under treatment at the hospitals and dispensaries of the Seamen's Hospital Society in 1895 and 1896," we are at once struck with the very small number of patients suffering from "tropical diseases" who have been under treatment. Amongst the general diseases we find 73 cases of malarial fever and 2 of bubonic fever but no other recognised tropical fever. Amongst diseases of special organs or tissues there were 44 cases of beri-beri and 4 of "hepatic abscess." Where, then, are the tropical diseases? The explanation is obvious. The acute cases either die at sea before they can reach the hospital or are of an infectious nature. In the former case they will not be available for "concentration," and in the latter the port sanitary authorities would interfere to prevent such "concentration." On the other hand, the Seamen's Hospital would seem in a great measure to be an asylum for sick sailors, for there were in the period stated 221 cases of pulmonary tuberculosis, of which 73 proved fatal, and of these 1 was in the hospital over 600 days, 5 were in over 300 days, 2 over 200 days, and 15 over 100 days. Whilst, therefore, fully desirous that support should be given to Mr. Chamberlain's scheme we cannot but wonder how he came to be advised to select the Branch Hospital at the Royal Albert Dock as the nucleus of the school. Further, it is intended that laboratories should be equipped at the new school for the purposes of research. But surely that is unnecessary. Laboratories already exist with every requisite appliance for such work on the Victoria Embankment, at Chelsea, and at certain metropolitan medical schools. Here qualified medical men already attend from all parts of the world, such

as Uganda, West Africa, Australia, Canada, &c., and diseases of tropical climates—such as malaria, leprosy, plague, cholera, Madura foot, &c.—have especially been made the subjects of original research. A knowledge of bacteriology is essential to colonial practitioners, but we doubt whether anything would be gained by the establishment of new laboratories, as is laid down in the scheme for the new school. There is another aspect in the present management of the proposed school to which we must refer—namely, the conduct of the committee towards the honorary staff of the *Dreadnought* Hospital at Greenwich. Sir Henry Burdett, in his letter to the *Times* of July 11th, stated that "the teaching staff will consist of the senior medical staff of the *Dreadnought* Hospital at Greenwich, as well as of the Branch Hospital, together with a number of teachers specially selected and attached to the new school." A few days later, however, a letter appeared in the same journal, signed by Dr. Curnow and Dr. John Anderson, the physicians to the hospital, and Mr. G. R. Turner, the surgeon, stating that Sir Henry Burdett's letter was the first intimation of any kind that they had that such a scheme was on foot, and that the statement was made without their authority. Such conduct on the part of the committee certainly needs an explanation, for on the face of it but scant consideration has been shown towards Dr. Curnow, Dr. Anderson, and Mr. Turner. At the last meeting of the Comitia of the Royal College of Physicians of London a letter was read from the Seamen's Hospital Society "asking the College to nominate a representative" on a committee appointed to organise a School of Tropical Medicine in connexion with the Branch Hospital. After some remarks, however, from Dr. Curnow and Dr. Anderson, the "previous question" was carried—an act of great significance as tending to show that without further explanation the College was unwilling to be represented on the committee.

THE INTERNATIONAL CONGRESS FOR THE SUPPRESSION OF ANARCHISM.

LUCCHENI, anarchist and assassin, has been condemned to life-long seclusion with hard labour—a sentence which John Stuart Mill thought so much severer than capital punishment that in the House of Commons thirty years ago he voted against the abolition of the latter on the ground of its greater humanity—and so from at least one active instrument of social chaos and destruction the world is now free. We have referred in a leading article in THE LANCET of Nov. 19th to the "anthropo-psychiatric" view of the case, but what of the organised conspiracy of which he was a member? Is civilisation to look idly on and let the anarchist propaganda extend and multiply proselytes? Is it only to drop its inertia when the head of a state or the scion of a royal house is done to death? The answer is an emphatic negative and comes appropriately from the Italian Government under which the conspiracy itself takes most congenial root and rears the most daring executants of its decrees. In the present week, accordingly, in Rome and on the invitation of the Minister of Foreign Affairs (Signor Canevaro), the European Powers, through their delegates, are assembling in the Palazzo Corsini to consider the best means of wiping out what Lord Salisbury calls "this monstrous affliction of humanity." The hall in which the congress meets is itself significant of the many interests which combine to inspire its deliberations. It is that in which the Accademia dei Lincei (the Italian Royal Society) holds its sittings and it has been watched and guarded with a precautionary vigilance which shows what scant consideration the anarchist is known to have for science and its treasures any more than for human life when they come between him and his fiendish purpose. The Prefect of Rome and the Questor (head of the police) have had all the substructure of the palace minutely examined and a special "surveillance-service" will be maintained over the building and its representative inmates till the proceedings have closed. Lord Salisbury indicated that with every wish for the Congress to attain its end he had little expectation of its doing so; and his lordship is justified in the remark. None know better than the British leaders of hygiene how difficult it is to get foreign Powers to agree as to the best mode of meeting a threatened epidemic. At the conference, for example, held in Rome some thirteen years ago to concert measures against the advance of cholera, the representatives of the southern Powers were unable to look at the question from the same point of view as their brethren from the north. They insisted on regulations and restrictions which would have made the remedy worse than the disease, while their whole habit of thought and of legislation was utterly opposed to what in Great Britain is regarded as lawful and sound. Instead of setting their own houses in order and keeping off disease by denying it the pabulum on which it feeds, they could think of nothing but quarantine or sanitary cordons, and while their ports were inviting the foe by their defective hygiene they were contented by creating artificial barriers to its approach which, even if effective, would have cost civilisation and its forces too dear. We venture to predict that the experience of our own delegates at the Anti-Anarchic Congress will be similar to that of their sanitary predecessors thirteen years ago. These same southern Powers by their misgovernment, their "bloated armaments," their intolerable taxation, their scant employment for the wage-earning poor and the hardness of living thus induced are themselves the fosterers, if not indeed the parents, of the social malady which they are seeking to suppress. But rather than reform or even abate the above sinister conditions they will devise and propose systems of surveillance and modes of repression which more healthily constituted Powers can neither approve nor adopt. It was this doubtless which Lord Salisbury had in view when he indicated how little hopeful he was of the success of the congress. It will not, however, have met in vain if its discussions should put in clearer light the economic and social abuses by which anarchism seeks to justify itself, if, indeed, it does not spring from them. The Italian press has recently been dealing with M. Moriand (Luccheni's counsel) and his contention that such privations as those to which Italy subjects her poor cannot but be prolific of the desperadoes who swell the contingents of lawlessness and crime. The more candid of her organs, indeed, admit the justice of the Swiss advocate's plea and contrast the misery prevalent south of the Alps with the contentment so visible on the north. They are beginning to appreciate what the professional classes in the kingdom—above all, the medical men—have long been advocating and fighting for: the enlargement of the resources of education at the expense of the merely combatant interests; the deflecting of the country's means and energies from the military and naval establishments to the schools primary and secondary and in the last resort to the Universities. This is a large programme, not to be carried out in its integrity but after much controversy in the constituencies and in Parliament. But it is one in which the welfare of Italy in particular is vitally involved, if she is not to be added to the list of those "decaying Powers" on whose "manifest destiny" Lord Salisbury discoursed so wisely and so well.

A CURIOUS CASE OF PHOSPHORUS NECROSIS.

A CASE of phosphorus necrosis due apparently to the inhalation of phosphorus fumes is recorded in a recent issue of *L'Odontologie*. The patient was a man, of good health, but addicted to the habit of excessive cigar-smoking,

consuming about 20 cigars a day and using many matches to each one, as he frequently interrupted the smoking during his work. It was computed that for the last 20 years he had daily inhaled the vapour of phosphorus given off by over 100 matches. The early symptoms were pain in the right eye, with swelling involving the whole side of the face. Suppuration supervened and the pus obtained a free flow into the oral cavity. The patient's condition grew worse and the maxilla was eventually removed. A few months later a fresh operation was necessary, but the patient collapsed dying from meningitis. The patient's teeth were in a deplorable condition, so that it is possible the phosphorus acted through the medium of the teeth as the cause of the necrosis.

"ANOTHER STREET DANGER."

IN an annotation under this heading in THE LANCET of Oct. 22nd we drew attention to the dangers which arise from the use of "flash-light" advertisements—advertisements, that is, which are alternately displayed and withdrawn by the turning on and off of a strong light—in the streets of London. Our attention was called to the matter by a report of an inquest on the body of a woman who was run over by a coal waggon at Kilburn. In this case it appears a horse had taken fright at one of these advertisements displayed in a first-floor window. The driver lost control of the animal and the woman was killed. In giving their verdict of "Accidental death" the jury added a rider protesting against the use of advertisements manipulated in this way. With this protest we expressed our hearty agreement, and it seems worth while to point out with greater fulness the nature and extent of the dangers which may arise from these inventions. These advertisements are often lighted by powerful electric lights and during the ten or twenty seconds in which the lights are turned on they brilliantly illuminate the part of the street in which they are placed. Suddenly this brilliant light is turned off and the streets are left in that condition of semi-darkness which the nearest gas lamp is wont to produce. The result of this sudden transition is obvious. If we suddenly pass from brilliant sunshine into a dimly-lighted room it is a matter of common knowledge that for the first half-minute or more we are quite unable to see anything. The eye takes an appreciable time to accommodate itself to the altered conditions in which it finds itself and fails to distinguish objects which after a moment or two it can discern with comparative ease. So it is with these most dangerous advertisements. For a few seconds everything is as bright as day. Then in a moment we plunge into what appears to be complete darkness. If we are so unfortunate as to find ourselves in the middle of the roadway when the light is turned off we have an excellent chance of never reaching the pavement except on a stretcher. The foot-passengers cannot see; the drivers cannot see; the horses cannot see, and, moreover, they are often rendered nervous by the sudden change from light to darkness, as seems to have happened at Kilburn. And if any one is run over it is difficult to apportion the blame. It may be urged that there is a remedy at law. If such a light is a nuisance and a danger an injunction could be obtained against its use. But this, after all, is an unsatisfactory method of safeguarding the public. It is not easy to find a man sufficiently public-spirited—or sufficiently litigious, if the term is preferred—to spend time and money upon a lawsuit to abate a nuisance from which other people suffer equally with themselves. Most people will prefer to run the risk or—if they are timid folk—will choose another place for crossing the road. But is it not rather ridiculous that the inhabitants of London and any other large town where these irritating advertisements are permitted should not be able to use their own streets in comfort and safety without such precautions? We should like to have the opinion of the policeman on duty at some point where a flash-light advertisement is in operation as to the additional difficulties which it causes him. A constable on duty, say at the top of Sloane-street, has none too easy a task in regulating the traffic even when all the conditions are favourable and he has a steady light to see by. But place him at intervals of twenty seconds in the full glare of a powerful electric light and then in what appears by contrast to be total darkness and he is practically helpless. A man cannot regulate the traffic when he cannot see it. And yet this very point, the top of Sloane-street, a narrow and very crowded thoroughfare where several lines of traffic converge, has been selected for one of these electrically lighted advertisements. It seems to us astounding that such a state of things should be permitted. It should be possible to find methods of advertising a tobacco, a beef tea, or a patent medicine, which are not actually dangerous to the safety of the community. We imagine that this aspect of the case has not struck the firms who make use of this method of calling attention to their wares. If this is so it is hardly too much to hope that the perils of the system, emphasised as they have been by the death from this cause which occurred so recently at Kilburn, will cause them to withdraw such advertisements altogether.

BILE PIGMENTS.

THE results of an elaborate series of researches on the bile pigments in the higher animals and in some of the invertebrates have been recently published in the *Archives de Physiologie* by MM. Dastre and Floresco. These experimenters started with the intention of demonstrating that biliprasin pigment, which it will be remembered was originally obtained by Städeler from gall-stones, corresponds to an intermediate stage between the two chief pigments, bilirubin and biliverdin. The experimenters arrive at this conclusion from an examination of the effects produced by oxidation in the air, those produced by oxidation by means of iodine, and those resulting from deoxidation owing to exposure in a vacuum. They have satisfied themselves that bilirubin—i.e., bilirubinic acid—does not exist free in bile, except perhaps in some strongly pigmented kinds of bile, as that of the pig, but that it is in combination with sodium as a neutral bilirubinate, for bilirubin is insoluble both in normal bile and in the decolourised bile of Plattner; moreover, the alkaline bilirubinates, contrary to the statement of Städeler, are only to a small extent soluble in water, whilst they are soluble in the alkalies and in the alkaline carbonates. Bile is, in regard to the nature of its fundamental pigment, a solution of sodium bilirubinate in the alkaline carbonates. The second principal pigment, green pigment, biliverdinic acid, is in similar case. It is, however, slightly soluble in normal bile and in decolourised bile, whether neutral or acid. It exists in the bile principally in the state of sodium biliverdinate dissolved in the carbonates. Solutions of bilirubin do not absorb oxygen from the air to pass into the condition of biliverdin. This absorption only occurs with the bilirubinates in becoming biliverdinates. The colour of solutions of the fundamental pigment depends on the quantity of the pigment and varies from a deep red containing $\frac{1}{15000}$ths or more to a pale yellow, which is always the colour of neutralised solutions. In normal bile taken from the gall-bladder MM. Dastre and Floresco have discovered two other intermediate pigments which they have named biliprasinic pigments. One of these is of yellowish brown colour and is the biliprasinate of soda. It is converted into biliprasin or green pigment by a current of carbon-dioxide and by acetic and most other acids, especially in presence of alcohol. It is not stable *in vacuo*, being decolourised

by the action of light, and when exposed to air and light it becomes green (changes to sodic biliverdinate). It is this biliprasinic pigment which gives its yellow colour to the bile of the calf, but it exists in other yellow biles. The second biliprasinic pigment is a green pigment; it is biliprasin. It differs from biliverdin—i.e., the biliverdinates—in becoming yellow (forming biliprasinate) on the addition of a few drops of alkali, and in becoming red (forming bilirubinate) on exposure to a vacuum. It is slightly soluble, especially in liquors charged with CO_2. It constitutes the ordinary pigment of the bile of the calf, of the fresh bile of the ox, and of the bile of the rabbit. The relation of the two pigments to one another is very simple. The yellow pigment is an alkaline salt of the green pigment. They are converted into each other by the alternate action of acids and of alkalies; thus, the acid forms one pigment, the alkaline salt another. This is in opposition to what occurs with bilirubin and the bilirubinates which are equally yellow, and with biliverdin and the biliverdinates which are equally green. Hence, contrary to what is usually stated, yellow bile can become green without oxidation. True biliverdin is less common than is supposed in bile. The biliprasinic pigments are intermediate to the fundamental pigments, bilirubin and biliverdin, in point of oxidation and of hydration. Those processes affecting the original fundamental pigment of the bile, bilirubin, commence possibly in the hepatic cellules and in the biliary ducts and certainly go on in the gall-bladder, but the artificial conditions for this change are not here realised. Hence the hypothesis of an agent or condition for inducing oxidation (hepatic oxidasis). In the invertebrata MM. Dastre and Floresco distinguish pigments soluble in water and pigments soluble in chloroform. The pigment soluble in water is named by them "ferrine" and contains iron combined with some proteid. The pigment soluble in alcohol and chloroform contains no iron and is identical with cholechrome. It has a spectrum with four bands and appears to be identical with the chlorophyll of plants.

THE COLOUR OF NEWLY-BORN NEGRO CHILDREN.

AN article appeared in the July issue of *Pediatrics*, commenting on the statement of the French physician, Dr. Farabery, that negro children when born are of exactly the same colour as are those born of white parents. The writer in *Pediatrics* quoted Dr. Farabery's assertion that he had had ocular proof of this fact at the Soudanese Exhibition held in the Champs de Mars, Paris, where he had seen negro infants up to the age of seven days and, in some instances, to a considerably later period, who were similar in every respect to white infants. The article in *Pediatrics* has called forth many letters from medical men practising in the Southern States of North America where the black race abound. They one and all stoutly deny the truth of Dr. Farabery's assertion, although it is somewhat curious to notice that they are not agreed as to the exact colour of the negro newly-born infant. For instance, one gentleman writing from Birmingham, Alabama, says: "I have been actively engaged in the practice of medicine, including obstetrics, in Alabama, without intermission, since the spring of 1886. Many others have had an equally large and ample experience to assume the attitude of authority on the subject under discussion, and our deductions would be that babies born of negro parents are black; some of them very black, others not quite so black as they get to be later. Those born of mulattoes, or mixed blood, vary according to the predominance of the white or black race; but however light the general surface may be, if negro blood exists the scrotum in the male is usually black, the female genitals do not show such distinguishing features so clearly." Another medical practitioner, living in New Haven, Missouri, writes thus: "Our experience tells us that the newly-born negro child is not of exactly the same colour as its white brother. The 'exhibition in the Champs de Mars' could not convince us against facts which have come under our own experience for many years. The colour of the newly-born scion of African parentage, whether of immediate or remote descent, is not the same as that of the Caucasian or American. It is a sallow or creamy white without the pink glow or tinge that marks the scions of Caucasian origin. We must take issue with the French physician that there ever appears 'a tender pink colour' if the slightest trace of African or negro blood is present. The 'tanned leather,' familiarly known as 'saddle colour,' belongs exclusively to a mixture of the white and black races. The pink rosy hue of the cheek of the Caucasian never has been seen in the cheeks of those having even one-eighth of negro blood in their veins." Here are three different opinions with regard to the colour of the newly-born negro. Dr. Farabery says that it is exactly like that of a white infant up to seven days old; the American doctor from Alabama says that it is always black; while his fellow-countryman from Missouri says that it is sallow or creamy white. The question is—who is right? There can be no doubt that from their greater experience the dictum of the American medical men is worth more than that of Dr. Farabery, but even they do not agree. It would be interesting to hear what practitioners in our African colonies and Egypt have to say on the matter. The Rev. J. G. Wood, in his "Natural History of Man," remarks: "As is the case with the negro race the newly-born infant of a Kaffir is nearly as pale as that of a European, the dark hue becoming developed by degrees." It surely would not be difficult to clear up this point.

SERUM v. VACCINE IN PESTIS BUBONICA.

PROFESSOR ALESSANDRO LUSTIG, director of the pathological laboratory attached to the Florentine School of Medicine, endeavours to dissipate the erroneous views which he finds prevalent, particularly in Continental Europe, on "serotherapy as contrasted with vaccino-prophylaxis" in pestis bubonica. The first serum used in Bombay, he says, was the French (Yersin), and that only in a limited number of cases during the epidemic of 1896–97. This, according to the official report printed in 1897, gave but poor results in the human subject—a finding subsequently confirmed by Koch. This was followed, in 1897 and in a limited number of cases, by the serum prepared (on a very different method from the French) in the Florentine laboratory. It succeeded in Bombay and at Poona in reducing the mortality in hospital to 40 per cent., while among the patients not so treated the deaths were 86 per cent. Coincidently with these experiments trial was made of the serum prepared at St. Petersburg on the Yersin method, with a mortality officially given as 82 per cent. In 1898, on the recrudescence of bubonic plague, there were made, almost contemporaneously and in the same hospitals, experiments with serum prepared on three different methods: (1) the Haffkine serum, giving a mortality of 82 per cent.; (2) the serum prepared in Russia on the Yersin method, yielding identical results; and (3) the serum prepared in Florence, reducing the mortality to 46 per cent. This last serum, which is hitherto the only one which has been systematically tried in several hundreds of cases, is now under the charge in Bombay of Dr. Gino Galeotti and Dr. Giovanni Polverini, of the Florentine school, who carry on their work in a laboratory fitted up for this purpose by the Bombay sanitary authorities. "To omit nothing," continues Dr. Lustig, "I may mention that towards the defervescence of the last epidemic, trial was made

of the French serum, not, however, in the hospitals, but only in isolated and distant centres. Of this the official report has yet to appear. Great confusion of thought," he adds in words which we translate textually, "is prevalent as to 'vaccine' and 'serum,' and so we often see mention made of the 'Haffkine serum,' instead of the 'Haffkine vaccine.' Now, Haffkine is a Russian physician who at first prepared a serum which proved inefficacious and who at present undertakes in India preventive vaccination—that is, inoculating the healthy subject with attenuated bacilli of the pestis. This practice appears to give good results, but the efficacy of a prophylactic means is determined with difficulty. We can pronounce better on a curative procedure, especially when the mean death-rate is very high. In any case this vaccinal treatment is not to be confounded with serotherapy, as is constantly done in the lay press."

THE DANGERS OF IRRIGATING EMPYEMATA.

IN the *American Journal of the Medical Sciences* (October, 1898) Dr. E. G. Janeway relates the following case. A man who had been operated on for sacculated empyema used to irrigate the sac with hydrogen peroxide. One day, three and a half months after operation, two minutes after the injection of a wineglassful of the peroxide he felt very peculiar and became for a second unconscious and of a pale greenish colour. He then found that his right arm and leg were numb and powerless; this condition lasted for twenty-five minutes. Three days afterwards he had an exactly similar attack except that also he lost power in his neck, his head drooped, and he had difficulty in breathing. The occurrence of serious nervous symptoms on irrigating empyemata has been noticed by several. M. Bonveret, in his work on Empyema, published in 1888, collected a series of such cases which he has grouped under the head of Embolic, Slow Paralytic, Syncopal, and Convulsive. The following case, published by Leudet, is somewhat similar to the one just described. A young man had the sac of an empyema regularly irrigated with a solution of iodine. On one occasion he was suddenly seized with malaise, a sensation of numbness in the right side of the body, and loss of speech. Gradually power of motion returned. Two attacks of the same kind occurred later. Afterwards this irrigation was continued for a year without further accident. Dr. L. Forgues relates another case in the *Archives de Médecine et Pharmacie Militaires*, 1894. During the irrigation the patient suddenly became unconscious, with pale face, cadaveric look, open eyes, and dilated pupils. Heart-beat and respiration were suspended. After cold flagellation they returned in about a minute. When the patient became conscious the right arm and leg were paralysed. After twenty-five minutes power returned to the right leg, but it was three hours before the right arm could be used. In our own literature, which Dr. Janeway seems to have overlooked, similar cases are recorded. In the Transactions of the Clinical Society, 1877, Dr. Cayley has recorded the case of a man who had an empyema repeatedly washed out. One day this was followed by convulsions, opisthotonos, and death in sixteen hours. In THE LANCET of March 17th, 1894, Dr. Fisher has published a case where collapse and hemiplegia occurred during perflation of an empyema. In THE LANCET of May 4th, 1895, p. 1101, Mr. Stephen Paget mentions a number of cases and also the case of a child who died at once after a cold lotion had been used to irrigate an empyema. What is the explanation of these accidents? Dr. Cayley and Mr. Paget regard them as so far unexplained. To the theory that they are due to cerebral embolism, from passage of some substance into the circulation during the irrigation, which naturally suggests itself, there is the objection that in fatal cases no cerebral lesions, embolic or other, have been found. Dr. Janeway, however—and it seems quite rightly—adopts the embolic theory as the only one which can account for the hemiplegia. He supposes that the emboli are of such a nature as soon to disappear—air or gas. He remarks that the symptoms occurred when the conditions were such as to produce pressure in the sac: the liberation of oxygen from peroxide of hydrogen; the measuring of the sac; changing of the tube; and pressure to hold the tube in its place. In support of this view he refers to Professor Lewin's experiments where death was produced by injecting air into the bladder, the air entering the venous system through the pelvis of the kidney. However, is not an alternative explanation tenable—that the emboli are solid particles so small as to have been overlooked at the necropsies? Dr. Samuel Gee, writing in Allbutt's System of Medicine, condemns injections in the treatment of empyemata as dangerous. He attributes the serious and fata consequences which may ensue to syncope, the cause of which is not understood. He refers to a fatal case in which the right cavities of the heart were found distended with gas, which supports Dr. Janeway's hypothesis.

A MEMORIAL TO THE LATE DR. BARRY OF THE LOCAL GOVERNMENT BOARD.

A TOUCHING indication of the esteem and respect in which Dr. Barry, the late senior medical inspector of the Local Government Board, was held is to be found in the fact that a handsome lych-gate has recently been erected to his memory in the village of Down in Kent, where he resided at the time of his sudden and premature death. The memorial in question has been erected by subscriptions from Dr. Barry's colleagues in the medical and other departments of the Local Government Board, as also from many medical officers of health throughout the country. The Yorkshire branch of the Society of Medical Officers of Health, amongst the members of which Dr. Barry spent some years of his official life, have collectively borne testimony by their contributions to the appreciation in which he was held by them. On the inside of the lych-gate is a tablet bearing Dr. Barry's name, together with the following inscription, "Erected by his colleagues and friends in token of their affectionate regard and high esteem of his life's work."

"LIVER-COUGH" AN UNDESCRIBED SYMPTOM OF HEPATOPTOSIS.

IN the *Journal de Médecine Interne* of Oct. 15th, 1898, M. Louis Vène relates the following case. A woman had suffered from cough for eighteen years, which since she came under observation (in 1891) was dry and incessant. Drugs were useless. She was examined by a laryngologist and by a number of physicians, including Professor Simon Duplay. The diagnoses of nervous cough and of hysterical cough were made. She happened to break her clavicle and a bandage was applied for a month which compressed the thorax and upper abdomen. During this period the cough was never heard, which was attributed to preoccupation. M. Vène's attention was attracted to a peculiar symptom—the patient never coughed at night. She said, "I sleep very little, perhaps two or three hours a night; but whether I sleep or not I never cough lying down whatever be my position in the bed." Examination showed that the liver extended to the level of the umbilicus in the right hypochondriac region. Hepatic dulness began at a lower level in the upright than in the recumbent posture—at the seventh rib. The thorax was compressed with a flannel bandage extending from the nipples to the umbilicus. The effect was remarkable. The patient had not a single fit of coughing. This result was maintained by bandaging from the

pubes to the nipples with rigid material—cotton or flannel—but corsets and complicated elastic belts proved useless. In none of the various observations on hepatoptosis is cough mentioned as an important symptom. But since Hippocrates "liver-cough" has been known, and, curiously, in 1831, when hepatoptosis was unknown, J. B. de Larroque, physician to the Necker Hospital, in a work on Certain Abdominal Diseases which Simulate, Provoke, and Maintain Diseases of the Chest, distinguishes "liver-cough" due to hepatitis and "liver-cough" coming on in the standing position caused by the weight of the organ. As to the manner of production M. Vène suggests that as the liver is (according to Faure) suspended from the vena cava, which is connected with the diaphragm, excitation of the latter produces the cough. He concludes that before making a diagnosis of hysterical cough the absence of any pathological reflex from the abdominal organs in connexion with the diaphragm, and particularly the liver, should be ascertained.

THE ETIOLOGY OF PUERPERAL FEVER.

THE question of the etiology of puerperal fever must always be a matter of special interest to all engaged in midwifery practice. In 1880 Pasteur first demonstrated the presence of streptococci in a case of puerperal infection, and for a long time it was thought that the streptococcus pyogenes or the products of its growth were the important agents in the causation of puerperal septicæmia. The further researches, however, of Brieger in 1888 and of von Franqué and Krönig in 1893 showed that puerperal fever might be caused not only by streptococci but also by staphylococci, colon bacilli, and gonococci. In the September number of the *American Journal of Obstetrics* Dr. Whitridge Williams records the results of the bacteriological examination of 40 cases of fever in the puerperium. In 22 instances pathogenic organisms were found—viz., the streptococcus in 8, the staphylococcus in 3, the colon bacillus in 6, the gonococcus in 2, the typhoid bacillus and the diphtheria bacillus in 1 each, and in 1 case the bacillus aerogenes capsulatus (gas bacillus) associated with the streptococcus. In 10 of the cases the usual pathogenic organisms were absent, but non-pathogenic bacteria were found, while in 11 cases where there was a more or less marked elevation of temperature the bacterial examination was entirely negative. In the cases where pathogenic organisms were absent it is uncertain what part the bacteria found played in the production of the symptoms, and it is quite possible that their presence may have been a mere coincidence. In the group of cases where negative results were obtained the temperature was no doubt due in some to auto-intoxication from the bowel, as shown by the results of purgation, and in others to mammary disturbances, while in a few no cause could be discovered. It is a well-known clinical fact that many cases of fever in the puerperium readily yield to brisk purgation, and the proof afforded by Dr. Williams's bacteriological examinations that in such cases the temperature is not due to septic infection from the uterus is of the utmost importance. With the fuller knowledge we now have as to the presence of pathogenic organisms in the uterus in cases of puerperal fever the question of what organisms are usually found in the vagina has a renewed interest. In the October number of the same journal Dr. Williams publishes a further paper upon the Bacteria of the Vagina based upon the bacteriological examination of the vaginal secretions of 92 pregnant women. The paper contains a full summary of all the work done upon the subject up to the present time, and Dr. Williams's results fully confirm the important results obtained by Krönig. We cannot do more than quote some of the conclusions arrived at by Dr. Williams although the whole paper will well repay perusal. They are as follows: "The vaginal secretion of pregnant women does not contain the usual pyogenic cocci. As the vagina does not contain pyogenic cocci auto-infection with them is impossible. It is possible, but not yet demonstrated, that in very rare cases the vagina may contain bacteria which may give rise to sapræmia and putrefactive endometritis by auto-infection. Death from puerperal infection is always due to infection from without and is usually due to neglect of aseptic precautions by physician or nurse." The vexed question of auto-infection cannot be regarded as completely settled, but the results of Dr. Williams's examinations enable him to assert positively that the usual forms of puerperal infection are not due to auto-infection, and although it is not impossible for this variety of infection to occur so far it has not been demonstrated. We shall not go far wrong, therefore, if in our midwifery practice we regard the vagina of a healthy woman as free from all such organisms as usually produce puerperal fever and if we remember Dr. Williams's conclusion that death from puerperal infection is always due to infection from without.

FATAL MISREADING OF A PRESCRIPTION BY A NURSE.

A PATIENT suffering from typhoid fever in the Tolworth Isolation Hospital has died from the effects of an overdose of laudanum given by the nurse in mistake. A card for the guidance of nurses was placed at the patient's bedside. On this was written by the medical officer the order for the patient to have an injection of half a drachm of laudanum. The matron directed the nurse to give this. Instead of half a drachm she gave half an ounce. The patient became insensible and died the next day. The nurse admitted at the inquest, held at Kingston-on-Thames, that she had misread the prescription. The jury found that the deceased died from an overdose of opium and expressed an opinion that greater care should be exercised with regard to poisonous drugs.

THE RIGHTS OF CHILDREN IN INDIA AND THE COLONIES.

IT is a regrettable fact that it is still true to a much greater extent than there is any justification for, and in spite of an advanced and Christian civilisation, that the weakest goes to the wall. Illustrations of this fact could be multiplied, but it will be sufficient to quote one of the most obvious. It consists in the cruelty, deliberate and regardless, to which very many children are subjected. With the efforts put forth by the National Society for the Prevention of Cruelty to Children all our readers are familiar. It is to be remembered, however, that that society has hitherto been a national one in the purely insular sense. Even so it has been most useful. We now learn with satisfaction that there is a prospect that other lands than our own will witness the rise of agencies identical with it in their purpose as they are one with it in their justification. A society has recently been formed in Calcutta for the protection of ill-used Indian children and the terms of its constitution are now under discussion in the daily press of India. It has been objected that this new organisation has been established in an exclusively Christian and even sectarian form. While sympathising with the implied ideal we cannot but think that it represents in this instance an error in principle and in policy. The practice of humanity, it should be remembered, is not exclusively Christian, though it has undoubtedly found its best advocacy and its highest development where Christian principles have been allowed to operate. No doubt the present difficulty will be judiciously settled so

as to enlist the cordial coöperation of all sorts and conditions of those resident in India, and thus to ensure the more effectual prevention of cruelty in that country. It is of equally happy omen that steps have been lately taken to organise the work of prevention of cruelty to children in Australia and other colonies. The methods pursued by the National Society for the Prevention of Cruelty to Children at home are such that no reasonable objection can be taken to them. Repressive though they must be they are no less powerfully educative, and numerous instances might be quoted in which with a minimum of friction a veritable reformation has been wrought by their means in the treatment of children by their guardians. We regard those methods indeed as representing a species of sanitary procedure in the realm of morals, and we therefore naturally desire for them the widest possible extension.

CYCLONE NEUROSES AND PSYCHOSES.

ST. LOUIS was visited in May, 1896, by a severe cyclone followed by slighter storms. Dr. Bremer some months later read before the St. Louis Medical Society a paper dealing with the nervous effects produced by this series of storms, and an abstract of this appears in a recent number of the *Neurologisches Centralblatt*. Among the most common effects were so-called hysterical and neurasthenic conditions induced in persons who were previously of a neurotic temperament. Hysterical monoplegia, aphasia, and aphonia were among the most common sequels and, on the other hand, there was not infrequently a transitory improvement in the condition of patients who were chronically hysterical. A true "cyclonophobia" was also of not uncommon occurrence and, indeed, everyone was taken with a kind of panic. One case of epilepsy was seen, apparently induced at this time, and malaria was more common than usual, as also was diarrhœa—a state of things considered to be analogous to the alleged connexion between earthquakes and epidemics. In some women the hair became dry and fell out; many people went about as if in a dream, and amongst the healthy there were several who confessed that for weeks and even for months they continued to dream of cyclones. The lower animals, also, especially fowls, dogs, and horses, showed the greatest fear in any subsequent storm. Finally, the interesting question is propounded—What deleterious influence is the cyclone likely to have upon the children born just after it—will there be "cyclone children" as there were the well-known "enfants de siège" in Paris after 1870?

DEATH AFTER MERCURIAL INUNCTION.

THE medical officer in charge of a large asylum—or workhouse as we should term it—in Belgium has recently been compelled to make his appearance in the law courts in a very unpleasant manner. Some months ago he instituted a kind of routine treatment on the admission of all infirm inmates in order to free them from vermin with which they were usually found to be swarming. This treatment consisted in the inunction of a compound of two parts of strong mercurial ointment with three parts of vaseline, followed an hour later by a bath. The average quantity of ointment used was a trifle more than a drachm. The number of patients subjected to this process was 630. Of these 30 showed signs of mercurial stomatitis, 17 of them being obliged to remain in their wards; 3 of these last had to be taken into the infirmary, 1 of whom, an old man, aged sixty-seven years, died a month later. A necropsy was made by the official medical officer attached to the courts and he gave it as his opinion that the mercurial inunction was responsible for the death. In consequence of this report the asylum medical officer was charged with the manslaughter of 1 inmate and with having injured 15 of the others. Several medical men gave evidence that in their opinion the treatment was proper. The court found that "it was not proved that the death was due to mercurial poisoning as it did not take place for a month after the inunction and there had been periods of improvement, and that though the ointment might have caused the stomatitis, this became 'ulcero-gangrenous,' assuming a serious and unexpected character in consequence of organic conditions which induced special morbid phenomena independent of the original cause." A fine of 15 francs was, however, imposed as the court considered that such heroic measures were not suited to all persons and that such a strong preparation should not have been ordered indiscriminately or without a medical examination of each person. This judgment when brought before the Court of Appeal was not sustained and the defendant was finally acquitted. Regarding the contention that he ought personally to have examined the inmates on admission it is stated that he was the sole medical man in charge of the 4000 inmates, that the infirmary always contained from 100 to 200 patients, and that from 50 to 100 consultations had to be given daily to those not in the infirmary, added to which the sole medical charge of the 125 officials and their families, some of whom resided at a considerable distance, devolved upon him, so that it would have been absolutely impossible for him to see and examine all the poor old vagrants and others who might be admitted. The moral of the whole case surely is that workhouses in Belgium require a larger number of medical officers.

THE REMOVAL OF TATTOO MARKS.

IN the *Archives de Médecine Navale* for October there is an instructive article by Dr. Félix Brunet, a junior surgeon of the French navy, on *Détatouage*, or the art of removing pictorial designs and inscriptions from beneath the outer skin. Soldiers and sailors — the latter especially — are notoriously fond of this species of adornment, but men at best are but fickle creatures and with advancing years many among them become anxious to be relieved of the too persistent records which they then no longer look upon as ornamental. As Dr. Brunet says, there are few naval medical officers who have not been asked by patients to remove tattoo marks, but unfortunately when their services are thus required they are obliged to depend upon their own resources, as little or no information is afforded by the text-books. It is true that an immense number of methods have been recommended both in ancient and in modern times, but all are more or less inefficient, while many of them are barbarous. Tattooing varies so considerably as to site, extent, and depth that no single method, however elastic, can possibly answer in all cases. Dr. Brunet enters into an elaborate historical survey of his subject, exhibiting a vast amount of erudition. Among other stories he tells once more how Bernadotte died rather than lay bare his arm for phlebotomy. In his salad days Napoleon's famous general had been an ardent Republican, and had he consented to the uncovering of the limb an elaborate design attesting to his unalterable devotion towards the Republic One and Indivisible would have come to light. In conclusion Dr. Brunet formulates his procedure as follows. "The empirical means proposed for the removal of tattoo marks being either inefficacious or dangerous, while the scientific expedient of re-pricking with various caustics is insufficient, we propose a method, more complicated but surer, and separable into the following stages: (*a*) delimitation of site to be operated on by diachylon plaster, anæsthesia by cocaine; (*b*) vesication by ammonia (*c*) removal of epidermis, free rubbing of exposed design by nitrate of silver

pencil; (*d*) after five minutes salt or boricated water dressing, to be renewed the next day, when also the diachylon may be removed; (*e*) cicatrisation under a powder formed of equal parts of iodoform, red bark, charcoal, and salicylate of bismuth. This method is not applicable to all cases. Sometimes, notably in tattooing of the face, dissection is the best treatment. When a very large design is in question it can be dealt with piece-meal." The method would probably be drastic, but whether its author is quite consistent in reflecting upon the barbarity of other processes while recommending his own is open to question.

TUBERCULOUS PERFORATION OF THE SOFT PALATE.

AT the meeting of the Société Médicale des Hôpitaux on Oct. 21st, 1898, Dr. Du Castel read the following case. A man, aged forty-two years, who had been very vigorous, lost flesh considerably. He entered hospital for a painful condition of the throat which almost completely prevented him from taking food. There was an oval perforation of the soft palate, in the middle line, measuring 6 mm. by 4 mm. At first sight it appeared to be syphilitic, but neither history nor examination of the patient revealed anything to support this view. Near the last right upper molar tooth and extending some distance on the palate was an irregular ulcer with granular surface and a yellowish-grey and sanious coating. At its circumference were numerous little yellow granulations presenting all the appearances of miliary tuberculosis of the mouth. At the left border of the perforation was a small granular ulcer with a pultaceous coating exactly resembling that on the former ulcer. Near the latter were three miliary granulations with tuberculous characteristics. The patient was manifestly tuberculous; he had pulmonary cavities, profuse expectoration, night sweats, and diarrhœa. He died some days after admission. The necropsy showed diffuse tuberculosis of both lungs. The nasal mucous membrane near the perforation was ulcerated and papillomatous. Numerous tubercle bacilli were found at the margins of the ulcer. Tuberculous perforation of the soft palate is very rare. M. Talamon published a case in the *Journal de Médecine Moderne* of Sept. 2nd, 1893, and declared that he could not find another in medical literature. M. Talamon's patient, unlike Dr. Du Castel's and the majority of patients with tuberculosis of the mouth, showed no sign of pulmonary tuberculosis and had a cough only a short time. When first seen he had had for several days sharp pains in the throat. There were dusky redness of the posterior part of the soft palate, uvula, pharynx, and tonsils, and irregular ulceration of the left tonsil. Near the latter on the soft palate were three yellow points, presenting all the appearances of tuberculous granulations. They enlarged, coalesced, and ulcerated. On the eighth day the soft palate was perforated. The bacillus tuberculosis could not be found. The patient was treated with cantharidate injections and applications of lactic acid, under which the ulcers almost healed and the perforation became almost obliterated. He then left the hospital.

ON Dec. 6th the meeting of the Pathological Society of London will be devoted to the exhibition and discussion of tumours and other morbid lesions of the pineal body. About eight specimens will, as far as is known at present, be available for the meeting, but any members who are willing to exhibit or read communications on the subject are requested to communicate with the junior secretary, Pathological Society, 20, Hanover-square, W.

THE Indian Government have asked for ten more medical men to serve temporarily on plague or general duty in Madras. Of these, four have already been appointed. Volunteers who may be ready to start for India at two or three days' notice are invited to send their names to the Revenue Secretary, India Office, Whitehall. Candidates must be under forty years of age. Other information may be obtained on application.

SIR JOSEPH FAYRER will soon leave London for a short space of time, but in view of previous incorrect rumours we take this opportunity of stating that his visit will be a short and temporary one. As readers of THE LANCET know it is not our habit to chronicle the movements of medical men, but as a report of Sir Joseph Fayrer's retirement from practice has been widely circulated we consider it fair to contradict it.

AS announced by Sir William Turner the 20,000 copies of the British Pharmacopœia originally printed have already passed into circulation and a reprint has been ordered. We are informed that the opportunity has been taken of indicating a few manifest errors and misprints. A slip containing these corrections may be obtained gratis from the publishers, Messrs. Spottiswoode and Co., Gracechurch-street, E.C.

THE London University Commission appointed under the University of London Act, 1898, has commenced its sittings. The Commissioners are Lord Davey (Chairman), the Bishop of London, Sir Owen Roberts, Sir William Roberts, Professor Michael Foster, Professor Jebb, and Mr. E. H. Busk. The Secretary is Mr. Bailey Saunders.

ON Monday, Nov. 28th, at the Camera Club, Charing Cross-road, Major Beevor, R.A.M.C., will deliver an address on the Use of the X Rays on the Battlefield in the late Operations on the Indian Frontier.

WE are glad to be able to state that there is not the slightest foundation for the rumour that Dr. Hale White contemplates resigning his post of physician to Guy's Hospital.

THE PRESENT STATE OF UNIVERSITY EDUCATION IN GERMANY.

THE November number of the *Nineteenth Century* contains an able and important article upon Recent Progress in German Universities. The writer points out how the events of the last two or three decades have tended to consolidate Germany and to give pre-eminence to Berlin. "Berlin has become a *Welthaupstadt*, a capital among the capitals of the world, conscious of her strength and fully capable of using it. Between the overgrown barracks, set in a plain, and the sovereign city of Imperial Germany, there lie the two great eras which have succeeded the victory over France—the Bismarckian era of union and the era of expansion under the Emperor William II. Both have tended to the aggrandisement of Berlin. The stream of creative invention has turned aside from the minor kingdoms and duchies, and the long line of princes who made of their provincial courts imperial seats of culture is gradually coming to an end." In other words, centralisation, so long the note of French culture, is now to have its turn in Germany, where in the past Weimar has divided intellectual honours with Berlin, Leipzig with Frankfurt, Dresden with Munich. We are spectators of a great secular movement which may be for good or for evil but which seems irresistible. The consequences of this movement must be far-reaching and

important. "The young German of to-day," proceeds the writer in question, "has to be educated in quite different duties and ambitions from those which sufficed for the young Prussian, Saxon, Bavarian, or Westphalian whom Matthew Arnold visited thirty years ago. His mental equipment must comprise those signs of union and expansion under which his country has developed. It is not enough to build engines in Dortmund, to worship Goethe in Weimar, to paint pictures in Munich, to tread grapes on the Rhine. The German eagle has planted his talons deep in the united Fatherland, and we are taught that on his wings is commerce and in his flight is peace." The new conception presented to the youth of Germany and to their instructors in culture is that of an epoch of scientific progress, industrial development, and colonial expansion, directed, controlled, and protected by the vigilant eye of the Kaiser. It will be admitted, at all events, that this is a much higher and nobler conception than that of a pure military *régime* of drill, barracks, and conquest.

This new conception of the object of life and the probable trend of national development is powerfully affecting university education in Germany. New subjects are being introduced into the curriculum, old subjects are being appraised by new standards, technical education and economical questions are receiving a great impetus. There are now, it would appear, no less than 4000 technical chemists in Germany who have enjoyed a university education. Thirty years ago the professors in the Berlin University devoted thirteen hours a week to the study of political economy. This amount of time is now more than doubled. The range of this subject has been extended and now includes such questions as labour rights, currency problems, social protective legislation, economic meaning of machinery, and so forth. The result is, on the one hand, to spread abroad juster conceptions of economic and industrial questions, and, on the other hand, to put into the hands of the Socialist party powerful weapons which they have been quick enough to use.

It is interesting to note what has been the German development of the idea of university extension, inasmuch as opinion in this country is somewhat divided with regard to the utility of the movement. It would appear that at various centres *Volkshochschulkursen*—popular university courses—were established and that their fortunes were various. In most cases the universities favoured the movement, while the State was hostile. At Munich Professor Brentano and some of his colleagues in the university threw themselves into the work, but the Bavarian Government refused to recognise the movement, and withheld the loan of the university lecture rooms with their various fittings and appliances. In spite of this opposition no less than 1500 persons, of whom about 1000 were males, attended the lectures in one session. Artisans and shopkeepers made up more than half the roll, and followed the instruction with regularity and intelligence. In Berlin the university senate has always refused its adhesion to university extension. It would appear that the movement is on the whole languishing in Germany from want of funds. The State is generally more or less hostile and private benevolence has not been conspicuous. The official hostility to the university extension movement seems to be chiefly influenced by a dread of the further growth of Socialism among the masses of the people.

The writer in the *Nineteenth Century* gives much interesting information regarding the status and functions of the *privat-docent*—that peculiar feature of German university life. He quotes Matthew Arnold to the effect that the *privat-docent* is "peculiar to Germany and is the great source of vigour and renovation to her superior instruction. ..... The *privat-docent* is an assistant to the professoriate and his lectures count as professors' lectures to those who attend them. His appointment is this wise. A distinguished student applies to be made *privat-docent* in a faculty. He produces certain certificates and performs certain exercises before two delegates named by the faculty and this is called his *habilitation*. If he passes the faculty names him *privat-docent*. ..... He is then free to lecture on any of the subjects proper to his faculty. He is on his probation, he receives no salary whatever, and depends entirely on his lectures; he has, therefore, every motive to exert himself." There can be little doubt that this is an admirable system, but it has grown up naturally in Germany and it is a serious question whether it could be transplanted to this country. It must be remembered that the *privat-docenten*, although often men of the highest culture and attainments, are content to work on year after year upon the scantiest incomes in the hope of future promotion. The comparative simplicity of manners in Germany, and let us in justice add the widespread love of knowledge for its own sake which exists in that country, make such a system possible. It is doubtful if many Englishmen of first-class attainments would work on for years upon the income of a clerk or an engine-driver.

The "modern" side of education is, we are informed, making great strides in Germany, and the technical colleges have kept pace with this development. A "Commercial College" was opened at Leipsic on April 25th of this year, and its aims and programme are understood to be in consonance with the Kaiser's views regarding the industrial development of the Empire. "The college aims at training a generation of business men, intellectually and socially as fully equipped as any 'Herr Doctor' of the conventional university course. It is not only, it is not primarily, designed for the benefit of trade itself. Indirectly, no doubt, the Empire will gain when its commercial classes and consular profession are recruited by men of university stamp. But its chief aim is the ideal one of benefiting the recruits themselves."

A VISIT TO THE SANATORIUM FOR CONSUMPTIVES AT NORDRACH.

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NORDRACH is a village situated about 1400 ft. above the level of the sea, some 20 miles south of Baden-Baden, in a valley of great natural beauty running up in a winding fashion towards the north-east amongst the mountains of the Black Forest. It is best reached by a drive of nine miles from Biberach-Zell. The rainfall is rather above the average, but there is plenty of bright sunshine. The atmosphere, remarkably free from dust, is at once genial and invigorating. Even in winter the patients can sit about in the open air with comfort. There are no mists here and catarrh is unknown. The valley is far away from all public entertainments; there is nothing to distract the patients from following the somewhat rigorous treatment. The means of communication with the rest of the world are under control and the right to open parcels coming to patients is reserved. The village inn was secured by Dr. Walther at the foundation of the colony, so that it is impossible for patients to break the dietary rules laid down for them.

The four pavilions, containing between 40 and 50 beds, present no special features except that arrangements are made for a complete system of airing, washing, and sunning of the rooms and corridors. Ledges where dust might collect are avoided. The bedrooms all look towards the south-west and the windows are of the "French" pattern

with a broad flap at the top opening outwards and upwards, so that this window space can be utilised for ventilation even during a heavy rainstorm. Each bedroom contains a shower-bath. There is a large dining-room, amply provided with windows, which are rarely closed, even in winter. There are no specially constructed shelters; protection from the weather is provided by the pavilions and places protected by nature. Attached to the sanatorium are a laundry, where all articles are steam-cleaned, a steam disinfector, an ice-house for keeping provisions, and an electric-lighting plant. Cows are kept for the use of the sanatorium. There are paths marked out as to distance and gradient running on the hillside amongst the trees.

The nursing staff has been specially trained at Nordrach. It is found here, as at other sanatoria and hospitals for phthisis, that women who have not gone through the exciting work of surgical and acute medical wards are more easily induced to take interest in phthisical patients and to carry out details of treatment essential in their management.

Patients are under strict medical supervision, being visited in their bedrooms three times a day, and the resident physician takes his meals with those patients who are allowed to dine "in hall." The patients are weighed every week and their temperatures taken four times daily. The only object recognised in the treatment is the cure of the disease; all other considerations must give way to this. Any deviation on the part of the patients from the daily routine prescribed is certain to come to the cognisance of the medical superintendent. However, the marked improvement noticed by the patients themselves soon reconciles them to the rather trying *régime;* here the good offices of the senior patients are found to be of great service.

As some misunderstanding exists about the matter a sketch of the method of treating phthisical patients at Nordrach, gathered from Dr. Otto Walther, who has carried out this system for the past nine years, may not be without interest. This should be prefaced by saying that no treatment for "hardening" patients is used, as at some sanatoria, anything of the sort being found quite unnecessary. The treatment proper may be placed under six headings: (1) sanatorial and self-discipline; (2) medical supervision; (3) fresh air; (4) regulated and induced feeding; (5) regulated exercises and rest; and (6) limited recreation.

1. *Sanatorial and self-discipline.*—These are very important points in the Nordrach treatment. It is here that the personality of the medical officer plays a great part. The details will appear later, but, generally speaking, the discipline referred to consists in suppressing habits which have aggravated or caused the disease and in cheerful submission to the line of treatment calculated to restore the patient and ensure non-recurrence of the disease after leaving the sanatorium. Seclusion from the busy world and freedom from the visits of friends materially assist in the treatment. If it is impossible to get to public entertainments the desire to go to them is easily suppressed. The disturbing influence of the visits of friends is well known in every hospital, but in such a colony as Nordrach they are more than usually harmful. They engender discontent and so depress the patients. People suffering from phthisis do not want "sympathy" except when *in extremis;* they like someone to make light of their symptoms and give them encouragement.

2. *Medical supervision.*—All patients are seen three times a day, some even more frequently. It is thought that one medical officer cannot with advantage look after more than from forty to fifty patients. Medicine is rarely given; tuberculin, antiseptics, and antipyretics have been tried in cases where the ordinary open-air treatment has failed, but the results have always been disappointing. The two drugs found most useful have been salicylate of soda and iodine, of which mention will be made later. A modified form of Dettweiller's flask is carried by each patient for use out-of-doors, spitting on the roads being prohibited; cups containing water are used indoors.

3. *Fresh air.*—This is the cardinal factor in the treatment. Patients are always in the fresh air—they sleep, eat, rest, and exercise themselves in the open. The windows are never closed whilst the patients are indoors; in very cold weather the patients shut them as they go out, so that they may return to warm rooms. It is surprising to hear how soon patients become reconciled to all this. In fact, any attempt to close windows is soon resented, for the patients immediately feel the depressing influence of vitiated air, and the necessity for a continual supply of fresh air remains with them after leaving the sanatorium. The genial climate of Nordrach is doubtless of great importance in this part of the treatment; not only must it be of service in making easy the assumption of open-air habits, but the absence of the depressing effects of many climates at certain times of the year must claim a considerable share in the result attained.

4. *Regulated and induced feeding.*—Except in severe cases, when the abundant use of milk is obligatory, there is nothing very special in the dietary. Food is taken regularly three times a day with nothing to eat or drink between whiles. Patients are induced to take as much as possible, especially of fatty food, and in most cases rather more than the natural appetite dictates. A little wine or beer with the food is allowed if desired. Encouragement to self-discipline plays an important part in this connexion, and a reference to the change of weight also is found to have a marked effect on the powers of deglutition. In some cases persuasion to take food is carried to an extent justified only by the surprising results obtained. It is considered that the vomiting and anorexia frequent in cases of phthisis are caused either in a reflex manner from irritation of the lungs or by the action of the tuberculous poison on the nerve-endings in the stomach itself. It is found that with perseverance, even after several vomitings, food is usually retained. It has been observed here and elsewhere that this condition of stomach is sometimes relieved by administration of tincture of iodine in 3 minim doses or so, or of about 10 grains of salicylate of soda, the ordinary stomachic drugs being inert. It should be remembered in this connexion that at Nordrach catarrh is unknown. Exaggerated ideas as to the system of feeding have got abroad owing probably to the use of the term "forced feeding." Dr. Walther suggested "induced feeding" as more accurately descriptive of his method. It is more by the example set them by senior patients that new arrivals are induced to partake of large meals than by any method of forcing employed by the physician. This system of calling upon the assimilating powers of the patient to fight a wasting disease must be a prominent factor in producing the astonishing results obtained.

5. *Regulated exercises and rest.*—These means of increasing vitality are used with the greatest care and vigilance. As long as any fever is present the patient is kept strictly in bed, no one except the nurse is allowed to enter his room, and she converses with her patient as little as possible. A week after the temperature has not risen above 100° F. or fallen below 98° walks regulated to the case are prescribed. The temperature is taken immediately after every walk, and if there is a rise above 100° a reduction of distance or gradient, or even return to bed, is ordered. The temperature is always taken in the rectum, for temporary rises due to over-exertion often disappear before they could be registered in the mouth or axilla. After each walk and before meals an hour's absolute rest is enforced. This rest must be taken alone, even conversation being forbidden.

6. *Limited recreation.*—Exciting amusements of all kinds and such as necessitate crowded rooms are prohibited, but recreation of a quiet nature is allowed. Formal entertainments are never given, but a piano is provided for the patients' use.

It will be seen from the above that the method of treating phthisis at Nordrach does not consist in pushing one or two supposed specific remedies, but in carefully employing to the utmost, under specially favourable conditions, means well known to assist the patient to battle with the disease. It is very important to bear this in mind at the present moment, when there is too great a tendency to rely upon "fresh air" alone as a specific for phthisis.

As to the results of the treatment, a cure is claimed if the temperature remains normal, if the patient regains his normal weight and strength, if he is able to follow his occupation with comparative comfort, and if he maintains this condition for some years. In some of these cases bacilli may be found in the sputum, but the disease is assumed to be arrested by fibrous tissue from further invading the lungs. Patients are encouraged to send reports of their condition to the resident physician after leaving the sanatorium. It is found that unless the *régime* inculcated at Nordrach can be continued to a large extent after the patient returns home relapses are very common, so that in the case of poor patients living in towns all the benefits produced by the treatment are often found to vanish in a very short time. It has been asserted by many that the cure is more permanent when

the patient is treated in his native country, but the evidence brought forward in support of this statement is as yet, we think, insufficient. The most obvious course to pursue is to put all patients as far as possible under the most favourable conditions for recovery. The result of the Nordrach treatment on the general appearance of the patients is very striking. It is difficult to believe that they are suffering from pulmonary tuberculosis. The anxious look and slow, constrained movements of the phthisical patient are wholly wanting. Those who can get about are bronzed and healthy-looking, with a cheerful, confident expression of face and brisk, free movements. More than 50 per cent. of the patients are English, the rest are chiefly Germans and there are a very few French people. Dr. Walther did not quote statistics, which are always difficult to apply correctly, but gave us the following general account of the result of his treatment. He refuses no sufferer from phthisis admission if there is room in his establishment, so that patients in all stages come under his treatment. Some in spite of every care continue to get worse, but these cases are quite exceptional—they appear naturally unable to combat the disease. Of the rest early cases do the best and usually go away cured. Respecting the seriousness of any case physical signs are not taken as the guide, but rather the effect of treatment on the general condition during the first few weeks after admission, for it has been found that patients presenting signs of advanced disease in both lungs have made a very good recovery even when on arrival they were extremely emaciated and suffering from the grave symptoms which accompany such a condition.

What cases, it may be asked, should be sent to Nordrach or to similar institutions? As the success of the treatment at these sanatoria depends, within limits, upon the resisting powers of the patient rather than upon the exact stage of the disease, it is advisable before sending a patient abroad to watch the effect of treatment as nearly as possible like that employed by Dr. Walther, either under private supervision or at a sanatorium. If no definite improvement take place the case is not likely to derive much benefit from the treatment at Nordrach and removal from England should not be urged. Some, especially the early cases, will recover under treatment at home. Others after improving up to a point will remain stationary for a time and then if more effectual measures are not taken will slowly sink. These cases imperatively call for treatment in a more favourable climate and unless financial or other reasons render it impossible they should be sent without delay to Nordrach or a similar establishment. Of course, if there is no reason to the contrary it would be best to send all except the hopeless cases to a place like Nordrach as early as possible. Another question naturally arises, How far could these methods be pursued with advantage in England? A careful consideration of the matter must end in the conclusion that our climate is an insuperable bar to the carrying out of such treatment in its greatest efficiency. Recent reports show that much can be done by establishing well-organised sanatoria in favourable situations, but these cannot be expected to produce quite the results obtained in the Black Forest. The impression left upon the mind by a visit to Nordrach is most encouraging. However sceptical one may be one comes away with the conviction that means are within our reach to cure in most cases a disease which a short time ago was regarded as almost hopeless.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE LANCET of Nov. 19th contained a brief note on the thirty-fifth sitting of the Royal Commissioners which was held on Nov. 15th. At the commencement of the proceedings Mr. PEMBER asked the chairman to allow him to put a question to Mr. Bryan, engineer of the East London Waterworks Company, with regard to a complaint which had been sent to the chairman as to the water-supply in Green-street, Upton Park. Mr. BRYAN explained that the deficiency in the supply was due to a defect in the ball-valve in the house of the customer who had complained. The witness, in answer to further questions, said that according to the returns of the Registrar-General there was no increase of typhoid fever in the metropolitan part of the East London Company's district.

The CHAIRMAN said that he had received a communication from the Board of Guardians of the West Ham Union saying that they had an unprecedented number of cases of typhoid fever, which they believed was due to the insufficient supply of water during the past four months. The witness said that he had no statistics with regard to the borough of West Ham, but that lately the mortality there had been nearly as low as that of Brighton, and according to the death-rate of the past six or seven months it might become a "new sanatorium almost."

Mr. BALFOUR BROWNE pointed out that according to the figures which the witness had given on the previous day the supply in September, 1897, was 42,128,000 gallons, and in September, 1898, 24,785,000 gallons, and that there was therefore a deficit which the company had to make good from elsewhere of 17,343,000 gallons, and that this amounted to no less than 41 per cent. of the total supply which should have been given. He pointed out also that in October, 1898, the supply as given by the witness was 41,752,000 gallons daily, and that the supply from the sources of the company was 23,112,000 gallons, and that this left a deficit of 18,640,000 gallons, or 44½ per cent. of the total quantity which should have been supplied and would have been necessary had there been a constant supply.

In answer to the CHAIRMAN Mr. BALFOUR BROWNE pointed out that the 41 per cent. and 44 per cent. were 41 and 44 per cent. respectively given on the average supply of 1897 during those two months.

In answer to Lord ROBERT CECIL, who appeared on behalf of the Hertfordshire County Council, the witness said that the company had six wells now working and that they were situated respectively at Lee Bridge, Walthamstow, Chingford, and Waltham Abbey, and that wells were under construction at Ponder's End, Rammey Marsh, Walthamstow, and Old Ford. At Waltham Abbey when pumping ceased the water overflowed; at Chingford, the next well, when pumping ceased the water rose to within about 12 ft. or 14 ft. of the surface. At Walthamstow the water level was about 30 ft from the surface and at Lee Bridge about the same distance. As, however, pumping had been going on continuously for many months the witness could not say what the present rest level would be. They were extending the underground channels at Walthamstow and the water was therefore kept constantly pumped out.

In answer to the CHAIRMAN the witness said that during the late period of drought the water rose in the wells when pumping ceased. They had had to stop on two occasions at Chingford in order to pack the pumps. They had also found it necessary to stop at Walthamstow and at Lee Bridge. In every case the water had risen to a height of perhaps from 100 ft. to 170 ft. above the pumps. This happened during the last fortnight.

Lord ROBERT CECIL examined the witness with regard to the flow of water in the Lee. He called attention to a paragraph in the report of the Balfour Commission to the effect that "the supply of the New River Company from the River Lee is regulated by the River Lee Water Act of 1855, under which a quantity of about 5,400,000 gallons daily is reserved for navigation, and as much as may be necessary in addition to keep up the head of water in each level of the river." The witness said that according to his reading of the Act this amount of 5,400,000 should be reserved for navigation.

In answer to further questions the witness said that of 8,000,000 gallons which were discharged over Fielde's Weir the company in September took 7,100,000 gallons and that therefore only about 1,000,000 gallons were left for navigation purposes. In October the flow was about 15,000,000 gallons daily, of which 10,700,000 gallons were taken by the East London Waterworks Company. It followed, therefore, that the statutory rights conferred for the purpose of navigation by the Act of 1855 were not enforced by the Lee Conservancy. The witness said that the Lee Conservancy did not enforce the provisions of the Act.

Mr. MATHEW WILSON HERVEY, engineer to the West Middlesex Waterworks Company, in answer to the CHAIRMAN, said that during the month of June they pumped 23,124,933 gallons; in July, 23,917,011 gallons; in August, 22,870,405 gallons; in September, 23,504,445 gallons; and in October, 21,372,626 gallons. These quantities were sufficient to supply their district. The quantity of water which they had to spare in June was 1,375,067 gallons per day; in July, 582,989 gallons per day; in August, 1,629,595 gallons per

day; in September, 995,555 gallons per day; and in October, 3,127,324 gallons per day. The company had now ample filtering capacity and had just finished four additional acres of filters, which brought their total filtration area up to nineteen acres. They would therefore be able to treat from 33,000,000 to 35,000,000 gallons daily.

In answer to the CHAIRMAN the witness said that at present they would not be able with their present pumping power to supply more than 1,500,000 gallons a day to any other company. The total amount of storage capacity which they possessed at present was 397,500,000 gallons. The witness agreed with the engineers of the other companies that the Battersea scheme would be a good one. He was not prepared to say, however, that each respective company would be likely to require it. The West Middlesex Company had not required such help in the past, and if they maintained their works in their present state of efficiency he did not think that they would require it in the future.

In answer to Mr. DE BOCK PORTER the witness said that the West Middlesex Company had always been in a position to meet the requirements of their district. From time to time it became necessary to extend their works and the company had always been prepared to do so when it was necessary.

In answer to Major-General SCOTT the witness said that at the present time the companies had statutory rights to take 185,500,000 gallons daily from the Thames and there was at the present time a considerable surplus—that is to say, all this water was not required for the supply at present given. The amount actually taken from the Thames was on an average 114,000,000 gallons daily. The margin between 114,000,000 and 185,500,000 was surplus.

Major-General SCOTT suggested that by an arrangement between the companies, by intersale or by some other means, the companies without increasing the statutory limits of their total authorised intakes could provide 15,000,000 gallons of water daily for Battersea.

In answer to Mr. BALFOUR BROWNE the witness said that at present, as far as the West Middlesex Company was concerned, he did not think the Battersea scheme was necessary except as an insurance, but "one never knows what misfortune may befall one."

Mr. RICHARD HACK, chief engineer to the Chelsea Water Company, in reply to the CHAIRMAN, said that they had statutory power to take nearly 10,000,000 gallons of water daily in excess of the amount which they required for their own customers. They were authorised to take 22,000,000 gallons daily, but at the present time they had not sufficient works to filter more than 17,500,000 gallons daily.

In answer to Mr. DE BOCK PORTER the witness said that the largest supply given on any one day was 16,000,000 gallons, which left 1,000,000 gallons which they would be able to spare.

Major-General SCOTT examined the witness at some length with regard to the passage of water from the mains of the Chelsea Company to those of the Southwark and Vauxhall Company. The witness said that in the daytime the pressure in the Chelsea Company's mains was greater than that in the Southwark and Vauxhall Company's mains, but in the night the pressure, he believed, was less. The Chelsea Company could, therefore, only supply water into the mains of the Southwark and Vauxhall Company during part of the day.

In answer to the CHAIRMAN the witness said that they would not be able to supply more than 3,000,000 gallons during any day. The Chelsea Company did not want the intercommunication scheme for themselves, but he thought that it was desirable that intercommunication should be made because it was useful in case of breakdown. Hitherto they had had no trouble in connecting up their own mains in cases of accident.

A question here arose as to the paper called the "Amended Report of Engineers" which had been sent to the Commissioners.

The CHAIRMAN pointed out that the Battersea scheme, or Scheme No. 2 as it was called, had been originally spoken of by Mr. Collins as a scheme of his own. Afterwards a print had been handed to the Chairman through the Secretary, he did not know by whom. The paper had never been proved.

Mr. FREEMAN pointed out that it was not on the notes and the CHAIRMAN said that it never had been put in by anybody.

Mr. PEMBER explained that the companies had sent the amended report "as an official communication from all the companies concerned, and they thought that would probably be enough."

Mr. ERNEST COLLINS was then examined by the CHAIRMAN, who asked: "Is this print Scheme No. 2?" The witness replied that it was.

The CHAIRMAN asked whether it was approved by all the companies. The witness replied that it had been sent in with the knowledge of the chairmen and proceeded to explain its working.

Mr. WILLIAM MORRIS, chief engineer to the Kent Company, said that he generally approved of the Battersea scheme, but he thought it required a little modification in order to give the Kent Company the benefit of it. The point was that the Kent Company would be able as a receiving company to obtain 4,000,000 gallons daily should they require it, whereas the Chelsea Company was to have 10,000,000 and some of the other companies 20,000,000 gallons daily. If it were provided that the Kent Company should if they required it receive the same amount of water as the Chelsea Company it would probably place them on a fair footing.

In answer to the CHAIRMAN the witness said that he did not expect that the Kent Company would require an extra supply of 4,000,000 gallons daily. It was a question of insurance. The CHAIRMAN asked what they wanted to insure against? The witness replied that it was against accident or unforeseen emergency; but in answer to a further question he said that he could not foresee anything beyond accident.

In answer to Major-General SCOTT the witness said that they were pumping from one of the very best reservoirs they could possibly have—that is, from the chalk, that any change taking place would be very gradual, and that they therefore had a very large insurance at present.

In answer to Mr. DE BOCK PORTER the witness said that the drought had affected the Orpington well, the ground elevation of which was 120 ft. above ordnance datum. No other well had been affected.

Mr. JOSEPH FRANCIS, one of the engineers of the New River Company, in reply to the CHAIRMAN, said that he had charge of the wells in the northern part of the New River system. The company had pumped more than usual during the past summer. The witness said that he had not the figures with him but that he would have provided them had he expected to be called. The Chadwell spring had failed this year.

In reply to Sir JOHN DORINGTON, the witness said that the water was delivered into a round basin and a leakage had occurred in that basin which allowed the water to flow out into the surrounding chalk.

In answer to the CHAIRMAN the witness said that the crack in the basin had prevented the water from rising to the usual level.

In answer to Lord ROBERT CECIL the witness said that his reason for believing in the existence of this crack was that the water had never sunk from the basin before; that, he thought, absolutely proved the existence of a fissure.

In reply to further questions from Lord ROBERT CECIL the witness said that they took gaugings of the Chadwell Spring, and in answer to a further question as to whether they had any objection to supplying the gaugings he said he thought that they had.

In answer to the CHAIRMAN the witness said that the Lee had been lower this year than they had ever known it in previous years. The deficiency was due to the higher sources; there was no connexion whatever between pumping from the wells and the deficiency. The effect of pumping from the wells was purely local. The wells were fed by a stream of water passing through the chalk from high ground. In answer to a further question the witness said that the high ground was situated more than a quarter of a mile off. The pumping from the well affected the underground stream on the lower side of their well—that is, in the direction in which the water was going, but beyond a very small range it did not have any effect in the other direction.

Sir ALEXANDER BINNIE, in answer to the CHAIRMAN, said that he had considered the Battersea scheme and that he did not think under existing circumstances that it was necessary. He was more in favour of Sir Henry Knight's scheme.

Mr. BALFOUR BROWNE, on behalf of the London County Council, suggested that he should be heard with regard to

the Battersea scheme. He thought the question was more a matter for argument than for evidence.

The CHAIRMAN thought the question was more one for the consideration of evidence than for argument.

THE HEALTH OF THE CITY OF BELFAST FOR 1897.

THOSE who are interested in the question of public health will find in the report just issued for 1897 by Dr. Whitaker, superintendent medical officer of health of the city of Belfast, an amount of material well worthy of perusal. There were 336 deaths from typhoid fever during the year 1897, as compared with 136 in the preceding twelve months; and, as we might expect, during the prevalence of the disease the deaths from diarrhœa were also more numerous than usual. 4813 cases of infectious diseases were reported (the Notification Act came in force on March 1st) and of these 3269 were cases of typhoid fever, the next largest number being 431 cases of scarlet fever. It is curious that the deaths from infectious diseases during the past year were not as numerous as in some of the preceding years, the increased numbers being entirely due to typhoid fever and diarrhœa.

There were 995 deaths from phthisis and 1675 from other diseases of the respiratory organs. The annual death-rate was 23·0 per 1000, while the birth-rate was 33·3, these calculations being based on a population estimated by Dr. Whitaker as 310,000. This population, of course, refers to the old municipal boundary. At the end of the year the suburban districts were added, so that in his next report Dr. Whitaker will deal with a city whose area has increased to 16,503 acres, with a population of 340,000. Coming to the causes of death, of the total number registered (7225) during the year it is appalling to find that 2670 were attributed to phthisis and diseases of the respiratory organs; of these 995 were due to the former and 1675 to the latter cause. This truly terrible loss of life, Dr. Whitaker says, beside which that from zymotic diseases sinks into comparative insignificance, occurs not only in Belfast but is quite as serious in other Irish cities and towns which have more healthy surroundings, a more equable temperature, and less unhealthy industries. Truly, here is ample material for the new crusade against tuberculosis to investigate. The medical officer of health of Belfast thinks that the effect of good sanitary work would be to reduce the death-rate from phthisis. The public in Belfast have clearly not grasped the fact that it is hopeless to eradicate this disease if they will not give up overcrowding and have ventilation and go in for sunshine and fresh air, and also take steps to prevent its spread by getting rid of the bacilli in the expectoration. Phthisis in Belfast causes more than half the number of deaths due to all other chest affections and about one-seventh of the total mortality. There can be no doubt that in Belfast the bad drainage, the damp atmosphere, and the frequent absence of sunshine contribute largely to the prevalence of phthisis, but overcrowding in the various industries and the prevailing ignorance as to the contagiousness of the disease are more important factors; and it is worth remembering in this connexion that it was in Belfast that Dr. Henry Mac Cormac (father of the President of the Royal College of Surgeons of England) long ago taught the enormous importance of fresh air.

With reference to typhoid fever it is deplorable to find Dr. Whitaker stating that while in almost every other town in the United Kingdom the deaths from this cause have been steadily declining in Belfast it is the reverse. He has examined the condition of 2321 houses in Belfast in which the disease occurred and has found that 353 of these had privies and pits with back passages; that 750 had privies and pits without back passages, and the excreta had to be removed through the dwelling house; and that 1218 occurred in the houses which had water-closets. Inasmuch as there are some 65,000 houses in the city, and of these only about 45,000 have water-closets, it is evident that typhoid fever was much more prevalent in the houses with privies than in those of the former class. It is a very noteworthy fact that whilst typhoid fever occurred in 2·7 per cent. of the houses having water-closets the houses with privies had 5·5 per cent. Dr. Whitaker says he agrees with the medical officer of health of St. Helens that the three most patent factors in fostering typhoid fever are defective sewerage and drainage, privy middens, and other filth nuisances, and yet he is puzzled in many cases to account for the disease. He says that in many of the cases the sanitary conditions in and about the houses where the disease prevailed were of a very bad order. On the other hand, he has inspected many well-built, well-sewered, newly-built, and airy houses with good sanitary arrangements in which cases of the disease have occurred, and on strict examination and inquiry he could find no cause for the prevalence of the disease. But surely this proves nothing. For if it be admitted that a disease like typhoid fever prevails in a city with a large working-class population it is easy to understand how one set of individuals who happen to have insanitary dwellings may infect others who live in houses apparently free from any defects. Dr. Whitaker mentions that in the early months of the year, when the number of cases of typhoid fever became numerous, a number of members of the Public Health Committee visited the Stoneyford reservoirs for the water-supply of the city and inspected the adjacent grounds. They found that the ground in the neighbourhood was heavily manured, and in some cases a stream communicating with the works was being contaminated by farm-yard refuse. They also found that there had been three cases of typhoid fever which had occurred about that time in a farmhouse immediately adjoining one of these streams, and although it could not be said positively that the contamination of the water had been the cause of the outbreak in Belfast yet the facts admitted of grave suspicion. It would appear that the disease has not been confined to any district of the city, but it is a curious fact, Dr. Whitaker says, that the two districts of Belfast (Dock and Millfield) which he considers most insanitary are those in which typhoid fever is least prevalent—an observation noted as also applying to other cities, as, for instance, Paris. The worst districts for typhoid fever appear to be Ballymacarrett and the Shankhill. In the former the houses are built on low-lying ground; in the latter they are on a high level with a tenacious clay soil. In both places there is a working-class population.

It will be seen that Dr. Whitaker comes to no definite conclusion as to the cause and prevalence of typhoid fever in Belfast. While he hints that the facts observed at Stoneyford admits of grave suspicion that contamination of the water has been the cause of the outbreak his report proves to the hilt how insanitary a city Belfast is, and explanation is badly wanted to show why it is that such institutions as the gaol and the asylum, situated within the city of Belfast and using the town water, have to such a great extent escaped the disease? We congratulate Dr. Whitaker on his most careful and highly interesting report, and although he has not solved the riddle how it is that typhoid fever is so prevalent in a new city like Belfast he has printed a series of recommendations drawn up by a number of professional gentlemen in Dublin (who investigated the causes of the prevalence of the disease there) which certainly if applied should go far to stamp out typhoid fever, and he has also given ample justification for the series of letters written last year by our Special Sanitary Commissioner. May we in conclusion suggest that a map of Belfast showing the boundaries of registrars' districts would be a most useful addition to Dr. Whitaker's excellent and suggestive report.

BURIAL WITHOUT CERTIFICATES.—At Helston (Cornwall), on Nov. 17th, the sexton of Godolphin Church pleaded guilty to burying on Sept. 24th two bodies of infants (one stillborn, the other having lived nine hours) without certificates. The case was brought forward by the Registrar-General as a warning, but he did not wish to press hardly on defendant. The man was fined 2*s*. 6*d*. and 6*s*. costs.

SCHOOL HYGIENE IN JAPAN.—An order has been issued, says the *Allgemeine Medicinische Central-Zeitung*, by the Japanese Minister of Education that the medical officers attached to the public schools shall not only inspect the schools as heretofore at the beginning and end of the school year but must visit them at least once a month during school hours for the purpose of noting any points of defective sanitation.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Manchester Sanitary District.—The estimated population of Manchester at the middle of 1897 was 536,426, the birth-rate was 32·88, and the death-rate was 22·36 per 1000. For two years in succession the death-rate has been below 23 per 1000 and as there are indications that the 1898 rate will not exceed this figure (which has never been so low for two years following before) Dr. Niven hopes that the efforts of the past few years have not been without their effect on the death-rate. Of the deaths occurring in Manchester during 1897 20 per cent. took place in public institutions. There are always so many matters of interest in Dr. Niven's annual report that it is somewhat difficult to know what to select for notice—so much so, indeed, that it is perhaps almost better to indicate briefly the contents of the volume for the guidance of our readers than to devote space solely to one subject in it. Into the question of school influences Dr. Niven has gone very minutely, and it is interesting to learn that the results of his inquiry clearly support the conclusions of Mr. Shirley Murphy, with which our readers are familiar. Dr. Niven has approached the subject in a fashion which will doubtless commend itself—i.e., he has endeavoured to trace the influence of each school in spreading, or in influencing the spread of, scarlet fever. It is clearly important to study this aspect of the question since it is obvious that in dealing with the district figures as a whole the influence for harm which may have been exerted by two or three schools may be entirely swamped by the absence of such influences in the remainder of the schools in the district. In connexion with the subject of enteric fever Dr. Niven speaks most highly of the value of the blood-serum test which has been carried on during 1897 and he promises us a full and detailed report upon the subject at a future date. Enteric fever manifested considerable infective power in Manchester during the year and in as many as fifty-four cases strong evidence was obtained pointing to personal infection. Outbreaks of this disease occurred in certain institutions under circumstances throwing grave suspicion upon infected closets as the source of the mischief, and valuable records are given illustrative of the manner in which enteric fever may cling to houses once infected with this disease. As regards the prevalence of tubercle in milk imported into Manchester as compared with that drawn from cows in the city itself Professor Delépine has carried on a series of examinations of samples collected at the railway station. Dr. Niven will present a full report on this question later, but he states that the examinations show that the average milk imported from the country is nearly as capable of conveying tuberculosis as is the milk collected from the most diseased cows in the city of Manchester, including even those with obvious tuberculosis of the udder. There has been during 1897 a check put upon the wholesome conversion of back-to-back into through houses owing to the enormous demand there is at the present time in Manchester for all sorts of houses, and the difficulty there is in obtaining unoccupied houses of any description. With a view to relieve this condition of affairs an effort is being made to obtain convenient means of transit for workmen under the Cheap Trains Act, 1883, in order that the central congestion may be relieved and the workmen enjoy better health.

Sunderland Urban District.—Dr. Harold Scurfield has compiled a complete and interesting report upon the health of this district (population 142,107) during 1897. Amongst the 33 great towns Sunderland does not at present occupy a very creditable position, being for 1897 twenty-seventh on the list as regards "fever," seventeenth as regards diarrhœa, and tenth as regards infantile mortality. Dr. Scurfield thinks that the relatively good position of Sunderland in this latter respect is due to the small amount of female factory labour in the district. In reference to the control of measles and whooping-cough arrangements have been made by which the school attendance officers report to the medical officer of health all cases of these diseases which come under their notice, and it is hoped that this method of notification will lead to good results in lowering the fatality-rate of these two diseases. Enteric fever is still abnormally prevalent in Sunderland, and the presence of 11,000 open privy middens is thought to be in large part responsible for this endemicity. It is of interest to read that in streets where the privy middens have been converted into water-closets there has been a considerable reduction in enteric fever incidence. Dr. Scurfield reports that an inspection of the public elementary schools was made during the year under review and that tests were made of the air in the class-rooms both before and after the usual recreation interval. Before the interval the average amount of carbonic acid per 10,000 parts of air was in the Board schools 10·36 and in the denominational schools 13·6; some thirty minutes after the interval in the Board schools 8·9 and in the denominational schools 9·32. The average amount of cubic space per scholar is greater in the Board than in the denominational schools. The investigations showed, amongst other things, that the class-rooms were not always emptied during the intervals and that in order for this to be done even in wet weather sufficient covered playground should be provided. It will, too, be noted how much the carbonic acid was in excess of the standard usually accepted.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6537 births and 3672 deaths were registered during the week ending Nov. 19th. The annual rate of mortality in these towns, which had been 17·0 and 17·2 per 1000 in the two preceding weeks, declined again last week to 17·1. In London the rate was 16·6 per 1000, while it averaged 17·4 in the thirty-two provincial towns. The lowest rates in these towns were 8·8 in Croydon, 10·9 in Derby, 11·6 in Oldham, and 12·0 in Hull; the highest rates were 22·4 in Newcastle-upon-Tyne, 22·6 in Liverpool, 23·1 in Wolverhampton, and 24·2 in Preston. The 3672 deaths included 371 which were referred to the principal zymotic diseases, against 420 and 412 in the two preceding weeks; of these, 90 resulted from diphtheria, 84 from "fever" (principally enteric), 61 from measles, 61 from diarrhœa, 45 from whooping-cough, and 30 from scarlet fever. No death from any of these diseases was recorded last week in Plymouth; in the other towns they caused the lowest death-rates in Croydon, Oldham, Wolverhampton, and Birmingham, and the highest rates in Nottingham, Burnley, Swansea, and Norwich. The greatest mortality from measles occurred in Norwich and Nottingham; from scarlet fever in Burnley; from whooping-cough in Halifax; and from "fever" in Derby, Sheffield, Norwich, Preston, and Birkenhead. The 90 deaths from diphtheria included 44 in London, 8 in Sheffield, 7 in Liverpool, 6 in Swansea, 5 in Blackburn, 4 in Leeds, and 3 each in West Ham, Cardiff, and Leicester. No fatal case of small-pox was registered during the week under notice, either in London or in any other of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Nov. 19th, was 3259, against numbers increasing from 2178 to 3138 at the end of the twelve preceding weeks; 319 new cases were admitted during the week, against 336, 318, and 340 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 237 and 248 in the two preceding weeks, further rose last week to 285, but were 136 below the corrected average. The causes of 41, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Bradford, Hull, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Liverpool, Burnley, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·9 and 19·4 per 1000 in the two preceding weeks, further rose to 19·5 during the week ending Nov. 19th,

and exceeded by 2·4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·8 in Paisley and 15·0 in Leith to 21·6 in Edinburgh and 23·0 in Aberdeen. The 588 deaths in these towns included 22 which were referred to diarrhœa, 14 to "fever" (principally enteric), 11 to diphtheria, 9 to whooping-cough, 8 to scarlet fever, and 6 to measles. In all, 70 deaths resulted from these principal zymotic diseases, against 80 and 86 in the two preceding weeks. These 70 deaths were equal to an annual rate of 2·3 per 1000, which was 0·6 above the mean rate last week from the same diseases in the thirty-three large English towns. The deaths referred to different forms of "fever," which had been 18 and 16 in the two preceding weeks, further declined to 14 last week, of which 8 occurred in Glasgow, 3 in Edinburgh, and 2 in Paisley. The 11 fatal cases of diphtheria corresponded with the number in the preceding week, and included 5 in Dundee and 3 in Glasgow. The 9 deaths from whooping-cough showed a decline of 2 from the number recorded in the preceding week, and included 5 in Glasgow. The fatal cases of scarlet fever, which had been 6 and 9 in the two preceding weeks, were 8 last week, of which 6 occurred in Glasgow and 2 in Edinburgh. Of the 6 deaths from measles 5 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 126 and 129 in the two preceding weeks, were 130 last week, and were 15 below the number in the corresponding period of last year. The causes of 36, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8 and 30·0 per 1000 in the two preceding weeks, declined again to 27·7 during the week ending Nov. 19th. During the past four weeks the death-rate in the city has averaged 27·2 per 1000, the rate during the same period being 16·3 in London and 19·3 in Edinburgh. The 186 deaths registered in Dublin during the week under notice showed a decline of 15 from the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 18 and 22 in the two preceding weeks; of these, 4 resulted from "fever," 2 from whooping-cough, 2 from diarrhœa, 1 from diphtheria, and not one either from small-pox, measles, or scarlet fever. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 1·5 in London and 3.3 in Edinburgh. The deaths referred to different forms of "fever," which had been 3 and 5 in each of the two preceding weeks, declined to 4 last week. The fatal cases of whooping-cough, which had increased from 1 to 4 in the three preceding weeks, declined to 2 last week. The mortality from scarlet fever showed a further decline from that recorded in recent weeks. The 186 deaths in Dublin last week included 45 of children under one year of age, and 39 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Nine inquest cases and 5 deaths from violence were registered; and 60, or nearly one-third, of the deaths occurred in public institutions. The causes of 11, or nearly 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are announced:—Staff-Surgeons: Horace Elliott to the *Philomel*, and Percy W. Bassett-Smith to the *Ganges*. Surgeons: Herbert L. Penny to Cape of Good Hope Hospital, George G. Borrett to the *Pembroke*, and Robert H. Mornement to the *Niobe*.

ROYAL ARMY MEDICAL CORPS.

The under-mentioned officers retire on retired pay: Lieutenant-Colonel Nicholas Leader and Lieutenant-Colonel Kenneth S. Wallis. Major Russell has embarked for Bombay and Major Freyer has arrived at Shorncliffe for duty. Major W. Dugdale is transferred from Bombay to the Nagpore District. Major Morse has embarked for India. Captain Tate and Lieutenant Penny embark for Sierra Leone. Lieutenants Nickerson and Hall join the Eastern District for duty, and Lieutenants Archer and Heffernan join the Dublin District for duty. Captain Blenkinsop embarks for service in West Africa.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions among the officers of the Indian Medical Service:—Majors to be Lieutenant-Colonels (dated Sept. 30th, 1898): *Bengal Establishment:* Terence Humphreys Sweeny, Daniel Francis Barry, George Francis Angelo Harris, John Anderson, Charles James Bamber, and Malachi O'Dwyer. *Madras Establishment:* Clement Mallins, Edulji Manekji Damla, and Herbert St. Clare Carruthers. *Bombay Establishment:* Charles George Walton Lowdell, Harry Beecham Briggs, and Walter Peter Carson. Captains to be Majors (dated Sept. 30th, 1898): *Bengal Establishment:* Robert Joseph Macnamara, Herbert Wilson Pilgrim, George Brooke French, Francis Wyville Thomson, Edwin Harold Brown, Charles Norman Bensley, Selby Herriot Henderson, David Wilson Scotland, Charles Robert Mortimer Green, James Henderson Sellick, Edward Christian Hare, Frank Cecil Clarkson, John Gregory Jordan, Herbert Mackinlay Morris, Allan Rupert Postance Russell, James Morwood, and Edmund Alexander William Hall. *Madras Establishment:* Richard Henderson Carter, Frederick George Maidment, and Ignatius Purcell Doyle, D.S.O. *Bombay Establishment:* Blenman Buhot Grayfoot and Thomas Edward Dyson. The Queen has also approved of the transfer of the under-mentioned officer to the Half-pay List: Lieutenant Ernest Le Fevre Payne (dated Nov. 3rd, 1898). The Queen has also approved of the retirement from the Service of the under-mentioned officers: Colonel Daniel Frederick Bateman, Madras Establishment (dated Oct. 31st, 1898), and Major Moscardi Bellarmin Braganza, Bombay Establishment (dated Sept. 15th, 1898).—*The London Gazette.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Clement Godson, 18th Middlesex Volunteer Rifle Corps, to be Surgeon-Major, and Surgeon-Lieutenant Albert Henderson, 1st Aberdeenshire Royal Engineers (Volunteers), to be Surgeon-Lieutenant.

MILITIA MEDICAL STAFF CORPS.

John Davies to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 2nd Hampshire (Southern Division, Royal Artillery): Paul McKenna Terry to be Surgeon-Lieutenant. 1st Lancashire: Frederick Francis German to be Surgeon-Lieutenant. *Rifle:* 3rd Volunteer Battalion the Welsh Regiment: Surgeon-Major E. Jones to be Surgeon-Lieutenant-Colonel. 1st Volunteer Battalion the Duke of Cambridge's Own (Middlesex Regiment): Surgeon-Lieutenant-Colonel F. Orton resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the battalion on his retirement. 2nd Volunteer Battalion the Highland Light Infantry: The under-mentioned officer resigns his commission: Surgeon-Captain W. B. Moir.

HOSPITAL TRAIN.

A correspondent writes:—"In the late war with Spain the United States not only made use of hospital ships but also of hospital trains. The hospital ships, although not altogether novel, were brought to such a degree of efficiency during the Hispano-American war that to all intents and purposes they initiated a new departure in warfare. The hospital train, however, is seemingly an absolutely new experiment. Mr. Sanbom, the gentleman who was in charge of it, thus describes it: 'The establishment of a regularly equipped hospital train is an entirely new departure in the time of war and to the United States Government the entire credit is due. Heretofore many inconveniences and dangers were met in transferring the wounded from the scenes of conflict, but it can now be done expeditiously and without the risk of aggravating wounds or subjecting the sick to undue excitement or the jolting incident to other forms of conveyance. This train is composed of 15 easy riding cars of Pullman build, very similar to the colonist sleepers. Twelve of these cars are fitted each with 30 berths, wash-rooms, lavatories, compartments for drugs, nurses' room, &c. Each car has its

own nurses, who are under the direct charge of an assistant to the head surgeon of the outfit. There is also a dining car with its chef and a corps of assistants which serves alike to patients, officers, and help. In addition to the Government rations there are provided many delicacies by the Ladies' Aid Society of the United States. This association also supplies quantities of night-shirts and underwear for the soldiers received into the hospital on wheels. Another car is fitted up as a complete operating theatre, with its varied assortment of instruments and furniture and a separate room for the disinfection of the soldiers' clothes. In this car is every appurtenance for an emergency surgical operation *en route*. Then there is a car devoted entirely to supplies, etc., and last, but not least, the rear car is fitted up as headquarters for the officers and surgeons. The train has its own locomotive, runs on a specially fast schedule, and is manned by the crews of the various systems over which it runs.'"

SIR FRANCIS GRENFELL AND THE ROYAL ARMY MEDICAL CORPS.

The *Army and Navy Gazette* says: Upon the return to Cairo of the Nile Expeditionary Force an address was delivered by Sir Francis Grenfell, the General Officer Commanding Her Majesty's Forces in Egypt, at a general parade on Oct. 8th:—

"Colonel Barrow, Officers, Non-commissioned Officers, and Men of the Royal Army Medical Corps,—I am glad of this opportunity of telling you of my high appreciation of the valuable services rendered by your corps during the late operations on the Nile. I regret that Surgeon-General Taylor and Colonel Macnamara are not present that I could personally thank them for their valuable coöperation. I have lately visited the hospitals at Atbara and Abadia, and was much pleased and greatly struck with their efficiency, by the care and attention shown to the sick and wounded, and by their general appearance of comfort. I can assure you that all branches of the service have been loud in their praise of the way that the sick and wounded were looked after both in the hospitals and on the field, and I may tell you that I have not heard a single adverse criticism with regard to the working of the medical arrangements."

The Director-General in a special order has recorded his extreme appreciation of the services rendered by the corps which have earned this commendation. The high character earned by all ranks of the corps certainly reflects great credit not only upon its members but also upon Surgeon-General Taylor, P.M.O., who has thus added to his reputation as an administrator.

THE ROYAL NAVY LIST DIARY FOR 1899.

All who are interested in the Royal Navy—and who is not?—will welcome the second annual issue of this useful naval handbook and diary. To mention some only of the contents, there is a Summary of the Year's Naval Progress, by Mr. L. Carr Laughton; complete schedules—monthly, quarterly, half-yearly, and yearly—for the recording of all drills and duties, and the making up of returns; obituary for the year, with the war and meritorious services of deceased officers; a calendar of notable naval events; and a detailed list of the benevolent funds and institutions in connexion with the navy, together with a brief statement of the objects for which they were founded. The diary gives a page to a day, and the whole book is complete in every respect. The frontispiece, "The First Line of Defence," which shows H.M.S. *Victory* off Cadiz in 1805, and H.M.S. *Illustrious* in 1898, is intended to illustrate the evolution of a first-class line of battleship in the nineteenth century. Messrs. Witherby and Co., 326, High Holborn, are the publishers, and the price of the diary is 3*s*.

THE STAFF OF THE NEW VICEROY OF INDIA.

Lieutenant-Colonel E. H. Fenn, R.A.M.C., who is at present, we believe, serving at Peshawar, has been selected for the appointment of surgeon on the Viceroy's staff. He held that post during Lord Lansdowne's Viceroyalty.

THE DIRECTOR-GENERAL OF THE INDIAN MEDICAL SERVICE.

Surgeon-General R. Harvey has proceeded on a tour of inspection in connexion with the duties of his new appointment as head of the Indian Medical Service.

LIEUTENANT-COLONEL FRANKLIN, I.M.S.

This officer returns with Lord Elgin, the late Viceroy. On his going back to India Lieutenant-Colonel Franklin will be appointed Inspector-General of Civil Hospitals, Punjab.

Correspondence.

"Audi alteram partem."

"THE QUESTION OF INDECENT LITERATURE."

To the Editors of THE LANCET.

SIRS,—With reference to your very fair and reasonable article on the questions that are raised rather than settled by a recent trial, will you allow me to state that the defendant was not the publisher of my "Studies in the Psychology of Sex"? He was not in any way connected with its publication, though he occupied premises formerly occupied by the publisher, and until these proceedings were initiated I was not even aware that he acted as an agent for its sale. It was stated in court that he sold in all three copies only.

You ask the very pertinent question: Why was not the book issued by a medical publisher? The answer is simple. None of the medical publishers whom I approached cared to take up a book on the subject of sexual inversion, one or two adding that they would have done so with pleasure had it not been their privilege to live in England. After a delay of two years due to this cause, I heard through a scientific friend that a gentleman interested in various philosophic and scientific subjects was preparing to go into business under a trading name for the publication of a few philosophic and scientific works and that he would be willing to issue my book. Ultimately I agreed to place the work in his hands on the definite condition that it should not be advertised or sent for review in any but medical and scientific quarters. In justice to the publisher I must point out that my book is the only one of his publications, mostly very serious in character, which has been incriminated.

With reference to your remarks concerning Ulrichs I should like to say that while I have inserted an appendix to my book (by another hand) expounding the views of that copious writer I do not consider that these views are of any scientific value and have explicitly rejected them. Ulrichs' writings are mainly of historical interest. He was himself an invert and he succeeded in directing scientific attention to the abnormality of which he was a victim. So far as standpoint is concerned, my own position is not materially different from that of Krafft-Ebing, though I am by no means in sympathy with the Viennese professor's treatment of these subjects. Certainly inversion when it arises on a congenital basis is "natural," but only in the same sense that all pathological anomalies are natural—colour-blindness, for instance, or hypospadias. I am not prepared to admit that congenital inversion is natural in any other sense.

I am, Sirs, yours faithfully,

H. HAVELOCK ELLIS.

THE EXAMINATION OF THE BRITISH OPTICAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—You make a comment in THE LANCET of Nov. 19th on the above in a tone of modified approval. If one may judge from the advertisements in the newspapers this association exists chiefly to furnish material for advertisements by its members. The prescribing chemist may be objectionable, but he does not generally do actual harm, whereas the consulting optician (or eyesight specialist) often causes harm and pain to young people who may consult him. My experience is that an emmetropic or slightly hypermetropic young person in his teens, doing some extra work and having a certain amount of spasm induced, is frequently by these advertisements lured to the "eyesight testing-rooms," where probably a couple of pairs of slightly differing low concave spherocylindrical spectacles are supplied, and then for a time the patient sees well, but ultimately in a few weeks worse spasm is induced and more pain.

The proportion of girls with defective visual acuity is greater than it is in boys at every age of school life; in them this spasm is exceedingly common, and it is girls who most frequently suffer from the wrong glasses of the

optician. The method, so far as I have been able to make it out as advertised, "Sight testing for the general practitioner," is on a level with that of the "honourable company" of spectacle sellers, being one which neglects spasm of the eye, and is on that ground to be condemned as likely to be unreliable if used to prescribe spectacles for young people. We now have our Board School children tested as to visual acuity, and errors of refraction become obvious as soon as young people go to work, so that glasses are becoming more necessary every day at earlier ages. The correction of the causes of the pain and inconveniences from refractive errors is part of a medical man's work and should not be allowed to pass into the hands of those who seem to be organising themselves into a vested interest; whilst at the same time their methods for the reasons given above are daily becoming unsuitable and actually harmful to increasing numbers of their patients.

I am, Sirs, yours faithfully,

JAMES KERR,

Honorary Surgeon to the Bradford Eye and Ear Hospital.

Bradford, Nov. 22nd, 1898.

*** We think the association will find our approval very modified.—ED. L.

THE TREATMENT OF TETANUS BY ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—Mr. Stonham's case of tetanus recorded in THE LANCET of Nov. 19th is of much interest as a case of tetanus, but it could hardly be a matter of surprise that in so acute a condition the treatment with antitoxin should have failed. Every surgeon will, I think, agree that as a general rule the shorter the period of incubation in tetanus the more acute in all probability will be the course of the disease, and the greater the likelihood that whatever the treatment adopted the remedy will fail. It is in the chronic cases where the symptoms are delayed and are in themselves less severe that internal remedies, and antitoxin amongst them, have seemed to be of most use, but in all cases the suspicion may fairly be entertained that the disease might have passed away without them. But if antitoxin may seem to fail or to be of comparatively small value as a mode of treatment in the course of the disease it is possibly far otherwise when it is used as an immunising agent. Happily, I have not myself had a case of tetanus in my wards for many years, and the experience of other surgeons is doubtless the same, because of the care now taken in the cleansing of all wounds. I am unable, therefore, to speak from personal observation, but a great impression was made on my mind by a paper in the *Annals of Surgery* of December, 1897, by Professor Dennis of New York on the Treatment of Tetanus. In speaking of antitoxin as an immunising agent he says: "All surgeons agree that it would not be justifiable to immunise a patient on the vague supposition that tetanus might develop. The use of the antitoxin as a prophylactic measure is consequently limited to those cases where the wound has been inflicted in such a manner as to allow garden-earth, plaster from walls, or manured soil to come in contact with it, or where the traumatism has been caused by a rusty nail upon which the bacilli are discovered, or in a given locality where tetanus is prevalent, or where the wound is a lacerated one with entrance of foreign bodies into it." And then, having referred to the marvellous prophylactic influence of the diphtheria antitoxin, he goes on: "If such results follow from the use of antitoxin as an immunising agent in diphtheria it is logical to expect that even more brilliant results will ensue in the adoption of this treatment in tetanus, since the antitoxin of tetanus shows even better results in lower animals. Under such conditions immunisation is a proper line of treatment and one from which success is sure to follow. Bazy, a French surgeon, had 4 fatal cases of tetanus in his practice in one year and subsequently began injecting 20 c.c. of serum into all patients who suffered from lacerated wounds into which extraneous matter had of necessity entered. Since he adopted this practice tetanus has not followed in those cases in which a strong probability existed that this dreaded disease might develop. Lambert mentioned that Nocard in veterinary surgery immunised 375 animals and in no single case did tetanus develop, while he had 55 cases of the disease in animals in the same environment."

It is open, of course, to everyone to question the value of evidence like this, where the prediction of tetanus might never have been verified, but the evidence, to say the least, is very striking. It is, moreover, in accordance with all that is known of the disease itself and of the behaviour of antitoxins in general to draw the conclusion that the antitoxin of tetanus is more likely to succeed in warding off the disease altogether than in arresting or putting an end to it when the symptoms have developed—that really is to say when the mischief has been done. In recording a case of hydrophobia in THE LANCET of Feb. 8th, 1890, where opium and eserine had been pushed to their physiological effects without result, I wrote: "The fact of the matter, however, is this: that at that period of the disease no drug treatment can be of the least avail to stay the progress of the effects which the specific poison of rabies has wrought in the most vital parts of the nervous system. The antidote must begin its work at an early period and no unprejudiced mind can doubt that that is to be found in the inoculations of M. Pasteur." Immunisation against hydrophobia, a very similar malady, has long been above question. I would urge the like treatment in the case of tetanus whenever there is reasonable ground for fearing that it may arise. I cannot help thinking that the antitoxin will then be proved of greater value than the record of cases treated by it up to this time seems to warrant.

I am, Sirs, yours faithfully,

Nov. 22nd, 1898. HERBERT W. PAGE.

"PHARYNGO-MYCOSIS."

To the Editors of THE LANCET.

SIRS,—The attention which has been drawn to the subject of this disease, as treated of in Dr. Lubet-Barbon's work on the subject and reported in your columns,[1] is extremely well deserved, if we may judge by the alarm which is experienced when its presence is accidentally discovered—an alarm which is absolutely uncalled for. From a consideration of the histology of the condition I have been led to adopt a plan of treatment to which no reference is made in your report—namely, the application of salicylic acid which is known to have so marked an effect in breaking up and destroying masses of cornified epithelium. The opportunities for treating such cases are not common, but I have found this remedy more effective than any other. The mode of use is to twist a very thin layer of cotton-wool on the tip of a fine bent probe. This is dipped in a 25 per cent. solution of salicylic acid in alcohol and is then applied to each spot of pharyngo-mycosis. In the intervals the patient may apply a 5 per cent. solution in rectified spirits to which a small proportion of glycerine is added. Although I hit upon this method of treatment without suggestion from elsewhere I understand that it has already been employed by Spengler. I recommended the remedy to my friend Dr. Herbert Tilley, and was gratified to find that his experience of its use was as favourable as my own.[2] I may add that I have employed the remedy in cases of recurring papilloma of the larynx with most satisfactory results, and I believe that even in pachydermia of that organ I have obtained by its use beneficial results such as no other treatment at my hands has brought about. I have great expectations as to the value of salicylic acid in various diseases of the throat.

I am, Sirs, yours faithfully,

Upper Wimpole-street, W., Nov. 21st, 1898. DUNDAS GRANT.

"AGORAPHOBIA."

To the Editors of THE LANCET.

SIRS,—After reading the very interesting article on agoraphobia written by Dr. Headley Neale in THE LANCET of Nov. 19th I would like to draw attention to symptoms which he would doubtless attribute to agoraphobia that are referred to in a recent publication, "The Secret of Good Health and Long Life" (Bowden), but which I consider belong to acute "tea-poisoning." I am not one who would consider that agoraphobia is "all bosh" exactly, but I have found some of the very characteristic symptoms

[1] THE LANCET, Nov. 12th, 1898.

[2] Proceedings of the London Laryngological Society, May 11th, 1898.

Dr. Neale refers to in those who have been in the habit of drinking a lot of tea and who now and then take it very strong, particularly the fear of death or that something dreadful is going to happen, which symptoms have disappeared when tea-drinking has been stopped.

As regards giddiness or faintness and nervous seizures on hearing a great noise or on going up a high ladder, I would attribute these to ordinary liver, heart, or nervous conditions rather than count them pathognomonic of agoraphobia, knowing as I do that the best observers may be worked up to such enthusiasm over some pet, or perhaps personal, ailment that they may sometimes be inclined to put down almost every disease under the sun to—eating butcher's meat, say, for instance. Dr. Prosser White found that "moral determination" and "lively conversation" were good in the way of treatment. I have advised these methods also in cases of acute "tea-poisoning" with success. Moreover, Dr. Neale writes that "the avoidance of over-mental strain and of all excesses, a careful dietary, aids to digestion and tonics, will together contribute to a satisfactory issue and ensure the disappearance of this pathological 'spook.'" No doubt he also told most of his patients to drink weak tea or none. It would be interesting to know whether Dr. Neale was in the habit of drinking strong tea during his student days when agoraphobia used to seize him. Something kept him awake, what time lamps were outshone by the sun. I should think it very likely he did, under the "temperate and celibate" but withal "rushing" and hard circumstances under which he moved and had his being.

I am, Sirs, yours faithfully,

Buckhurst Hill, Nov. 21st, 1898. HAYDN BROWN.

THE "OPEN-AIR" TREATMENT OF TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—At the present moment probably nothing is attracting more attention both amongst the profession and the public at large than the possibility of grappling with that terrible scourge, tuberculous lung disease. The most rational and the recognised only satisfactory method of dealing with this disease is what is called the "open-air" method, and to carry out this treatment it is proposed to establish in England sanatoria with the object of so dealing with tuberculous lung disease. Now there is no question that the erection and maintenance of these buildings, wherever they are, will absorb a large amount of capital and a considerable expenditure annually. If all that is talked about and expected of these places were one-tenth realised, looked at from a charitable view only, anything would seem justifiable, but it is because I have very grave doubts of their success in treating the disease in question that I would ask you to publish these facts as to what the "open-air" treatment really is, or should be, and whether it is possible even in a small degree to carry it out in England.

Its primary and essential point is—out of doors all day and till bedtime (i.e., from 8 A.M. till 10 P.M.) except for meals. The conditions under which this is carried out in the various continental health resorts are as follows. There is almost perpetual bright sunshine from 9 A.M. till 4 P.M. in mid-winter and longer as the season alters; the air is of an extreme dryness, and this is probably one of the two most important points, the other being height, from 5000 ft. to 6000 ft., with the barometer standing from 24 in. to 22·5 in., the constant automatic expansion of the lung going on under the greatly reduced pressure, causing around cavities and deposits an emphysematous zone which cuts them off from the healthy lung; the great purity of the air caused by the cold and the surrounding snow and brilliant sunshine—the finest germicide known; the almost total absence of wind which no affected lung will stand, and the actual great heat and brilliancy of the sunshine, shining through the rarefied air with great power, without the intervention of an obstructing dense atmosphere;—these, then, are the conditions which enable a tuberculous patient to be out in the balconies or walking out in the snow from daybreak till bedtime, and hence the favourable results; it is, in fact, the nearest approach to treating the lung aseptically that is possible. We cannot treat it as we do any other wounded portion of the body, we cannot dress the cavities in it, but we can apply very dry aseptic perfectly pure air day and night (for the windows are open at night, with the thermometer 10° or more below zero), and this aseptic treatment of the lung is very successful.

Now let us turn to the suggested treatment in England; and I may say at once that almost every necessary condition is wanting. The sun is often absent and without power, the air is certainly often far from pure—it is during a greater part of the winter saturated with moisture, and this is most important as it almost seems as if moist air is an exciting cause of tubercle, certainly almost an incubator for the bacillus. There is constant wind from all directions—S.W. laden with moisture, N.E. biting and often damp. There is no reliable dry cold of any duration and there is no possibility of producing expansion of the lung from rarefied atmosphere in England. It is evident from this that all the conditions recognised as necessary are absent from our climate, and there are but few days in the winter and early spring in England when a patient with tuberculous lung disease could lie out of doors all day or walk about. Face which way the balconies or promenades in England will, they would be liable to be invaded with drifting rain or sleet and blown out with gales of wind. The result would be that they would be closed in and then the "open-air" treatment ceases to exist. I am sure that upon consideration many will agree with me that it is impossible in England to satisfactorily, even in a small degree, carry out the treatment I have indicated and which is the method pursued on the continent. To my mind all the necessary conditions are absent, and as it used to be said that "bricks could not be made without straw," so it seems to me that it is well to pause and consider before embarking on a scheme which will probably end in great disappointment to both patient and medical man, and which seems to me to be trying to do the "impossible." No one can deny that as much "fresh air" as possible is a great improvement on the horrid old system of stuffy rooms and hot air for tuberculous lung diseases; but that the "open-air" treatment can be pursued in England during an English winter, where not one single necessary condition is present or can be obtained, seems to me to be perfectly impracticable. One day spent out of doors, followed by two or three in the house because of mist, fog, wind, or rain, or cold without sun, would more than undo any good which had been obtained, and that seems to be the best which can be hoped for. I have written at great length on a very important subject and I hope it may elicit the opinions of medical men more competent to judge than I am. But I do think the questionable benefit of establishing sanatoria in England for the "outdoor" treatment of tuberculous lung disease seems under the conditions I have indicated to require very well weighing in the balance before carrying it out. That temporary benefit may follow the partial open-air treatment I do not deny, especially to patients removed from their insanitary surroundings. But under the climatic conditions, both present and absent, I do not think that we can look for, or hope to see, many, if any, actual cures—the conditions would conduce to the opposite direction.

I am, Sirs, your obedient servant,

Nov. 14th, 1898. A. G. P. GIPPS.

To the Editors of THE LANCET.

SIRS,—I pointed out some years ago[1] that the late Dr. George Bodington, of Sutton Coldfield, Warwickshire, was the first to devise and carry out the present system of generous diet and open-air exposure for the cure of consumption. In those days (1840) before the theory of "phlogiston" had collapsed under the influence of microscopic pathology, he had many difficulties to contend against, and his plan of treatment, although successful with a certain number of cases, met with such derision and contempt that he finally gave up the practice, taking lunatics into his house-sanatorium instead of consumptives—a laudable course to pursue in his case, as he was returning good for evil to the class who criticised and reviled his project. The effect of adopting a suitable diet and fresh country air for the treatment of phthisis is rather ancient history, but Dr. Bodington grasped the points of their efficacy and brought these remedial agents into systematic working order. Much that he has written in a faded little volume of some 60 pages might be reproduced as a fresh article on the dietetic and open-air treatment of consumption. Why so many writers on this

[1] Alpine Winter in its Medical Aspects, 1884.

subject represent the method as having been "made in Germany" I am unable to say. Certainly Dr. Brehmer carried it out with satisfactory results in 1860, but the plan had been clearly laid down and described by Dr. Bodington, who practised it twenty years previously to Dr. Brehmer and who published his success with the cases which submitted themselves to his scheme of treatment.

Our attention has been directed recently to the remarkable results reported as having occurred under the system of feeding and fresh air as conducted in the Black Forest, a climate which has been compared with that of the English lake district, in winter. There is no question as to the efficacy of over-feeding and fresh air in those cases which are fortunate enough to possess digestive organs fairly strong and unimpaired, but we must not lose sight of the important part which climate plays—especially mountain air—in the cure of pulmonary consumption. One good effect following the success of sanatoriums established in inferior climates will be to stimulate the scheme of providing similar institutions in England, where a great deal of what is lacking in "climate" can be made up in a nutritious and digestible dietary. There is no country in Europe where good food is so cheap and abundant, nor meat, fish, poultry, and game of a better quality. The advantage also of patients being treated by medical men of their own nationality, who have an intuitive knowledge of the national constitution, are familiar with the habits and customs of English people and their requirements, is not to be forgotten.

Personally, I am sorry to see our well-tried old remedy—alpine climate—temporarily slighted in favour of rival sanatoriums with quaint innovations, but in the main simply carrying out effectually the treatment originated by Dr. Bodington, from whose "Essay on the Cure of Pulmonary Consumption on Principles Natural, Rational, and Successful" I may be permitted to quote. He writes:—

"I should recommend to one thus consuming away under the influence of this *wasting disease* a nutritious diet of mild, fresh animal and farinaceous food aided by the stimulus of a proper quantity of wine, having regard to the general state and condition of the patient. ..... I have, as will be found by a perusal of the following pages, employed a nutritious and moderately stimulating diet with much success; and without that I do not think the other means could have been so effectual or the treatment complete. ..... I have taken for the purpose a house in every respect adapted, and near to my own residence, for the reception of patients of this class. ..... It is presumed that the advantages to be derived from systematic arrangements with regard to exercise, diet, and general treatment, with the watchfulness daily, nay, almost hourly, over the patient of a medical superintendent, great advantages may be obtained by the consumptive patient treated in this way."

Speaking of the therapeutic agents in use at that time (in 1839) he continues:—

"One mode of treatment consists in shutting the patients up in a close room, to exclude, as far as possible, the access of the atmospheric air, and thus forcing them to breathe over and over again the same foul air contaminated with the diseased effluvia of their own persons. ..... This is, indeed, a treatment founded on the most erroneous principles."

Referring to the inhalation of gases of various kinds Dr. Bodington says:—

"The only gas fit for the lungs is the pure atmosphere freely administered without fear; its privation is the most constant and frequent cause of the progress of the disease. To live in and breathe freely the open air, without being deterred by the wind or weather, is one important and essential remedy in arresting its progress, one about which there appears to have generally prevailed a groundless alarm lest the consumptive patient should take cold. ..... Farmers, shepherds, ploughmen, &c., are rarely liable to consumption, living constantly in the open air, whilst the inhabitants of towns and persons living much in close rooms, or whose occupations confine them many hours within doors, are its victims. The habits of these latter ought, in the treatment of the disease, to be made to resemble as much as possible those of the former class, as respects air and exercise, in order to effect a cure. ..... I come now to the most important remedial agent in the cure of consumption, that of the free use of a pure atmosphere. The abode of the patient should be in an airy house in the country. ..... The patient ought never to be deterred by the state of the weather from exercise in the open air; if wet and rainy a covered vehicle should be employed, with open windows. The cold is never too severe for the consumptive patient in this climate; the cooler the air which passes into the lungs the greater will be the benefit the patient will derive ..... and means applied to stimulate and invigorate the nutritive, sanguiniferous, and muscular powers; wine and such nourishing diet as the stomach could bear and by means applied to soothe and allay nervous excitement locally and generally. ..... Apartments should be kept cool and airy, corresponding to the external atmosphere, which should be courted and indulged in to the utmost."

After impressing on the reader the necessity of a generous diet, consisting of fresh meats, eggs, farinaceous food, beef-tea, milk, &c., as much as the digestion could bear, with wine or wine and water, according to circumstances, he concludes by the relation of some cases and a reiteration that the bedroom should be cool, airy, and properly ventilated and the sitting-room should have the windows wide open. I have quoted Dr. George Bodington at some length in the endeavour to point out by his own words and practice that we must regard him as the originator and introducer of the modern treatment of pulmonary tuberculosis. I am not aware of anyone having forestalled him in clearly laying down the principles which now guide us in all health resorts and sanatoriums devoted to the cure of consumption. Dr. Bodington must be accredited, too, with the courage of his opinions, for in those days of antiphlogistic remedies it was a bold, intelligent innovation deserving of all recognition and praise. Even that distinguished physician Sir James Clark sarcastically alluded to it at the time as the "beef steak and porter system," which he decidedly condemned.

I am, Sirs, yours faithfully,

A. TUCKER WISE, M.D. Brux., Diplôme Suisse Fédéral, M.R.C.S. Eng., L.R.C.P. Lond.

Montreux, Switzerland.

"THE WATER TEST AS APPLIED TO SEWER CONNEXIONS."

To the Editors of THE LANCET.

SIRS,—I, like your three previous correspondents (*vide* THE LANCET of Oct. 29th and Nov. 12th), have never been quite satisfied with the manner in which the portion of the drain between the intercepting trap and the sewer is put in by the authorities' workmen or contractors in London or elsewhere or of the connexion in the sewer. When, however, one is aware of the seriously unsound condition of main sewers, and thereby the greater contamination of soil and earth currents, and their ready conducts into the residences by means of water and gas pipes and the larger conduit outside the drain, also the contamination of water-supply *viâ* unsound pipes or joints of the water-mains, the outcry against this small portion of probably unsound drain is very much like "jumping at gnats and swallowing camels."

Old practical sanitarians have by their experience always been convinced of the benefit inmates of houses with sound drains obtained in improved health and vitality, and I hope that serious attention will be drawn to the dangerous condition the sewers of London (and also our principal health towns) are in, more especially where towns are sewered upon the "combined" system, in consequence of the correspondence commenced in THE LANCET, and still greater benefits to health obtained to a larger number of people.

I am, Sirs, yours faithfully,

DANIEL THOMAS BOSTEL, R.P.C.

Ebury-street, S.W., Nov. 16th, 1898.

"A NEW SYMPTOM IN PARALYSIS AGITANS."

To the Editors of THE LANCET.

SIRS,—The new symptom to which Dr. Purves Stewart draws attention in his interesting paper in THE LANCET of Nov. 12th is present in a case now under my care. The patient, a woman, complained to me about a month ago of this "curling up" of the toes on the right foot. I have seen her this morning and the symptom was described to me again. It almost always occurs after walking about 200 yards, generally commencing in the third toe and rapidly spreading to the others, including the big toe. Walking is then very painful and soon impossible, although she has often persisted for a time by treading on the side of the foot or heel only. The "curling up" itself is not painful and passes off at once on her sitting down. Any little excitement when walking is apt to produce it immediately. In this case it was not an early symptom, the disease having declared itself some months previously. As this is the only case of paralysis agitans under my care at the present time it is, I think, an interesting corroboration of Dr. Stewart's observation.

I am, Sirs, yours faithfully,

W. J. ERNELY SUMPTER, L.R.C.P. Lond., &c.

Sheringham, Nov. 15th, 1898.

THE ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—A very important question underlies that raised at this meeting concerning the abuse of medical aid associations. It is whether our profession has a right to enforce its unwritten laws on its members. These laws consist in essence of the opinions of the great majority of the profession. There can be no doubt as to this opinion so far as advertising and canvassing in a direct form are concerned, and the Council of the College has often imposed an extreme penalty. Can there be any doubt whatever as to the views of the profession at large on this most flagrant form of the same offences carried on in the name of their medical officers by these trading associations? Why, then, should there be any difficulty in putting a stop to the scandal? Is it not high time that the corporations should more readily and promptly reflect professional opinion? Laymen, whether as individuals or as associations, must be shown that professional services can only be rendered under professional conditions. This doctrine will be called by some trades-unionism. It is, however, nothing of the kind, since it is entirely in the public interest that the profession should retain its independence. As Mr. Bryant says: "It is all-important for the interests of the public as well as for the due exercise and dignity of our profession that every practitioner of medicine should hold a perfectly independent but responsible position and that in his professional work he should be left entirely free from lay control, though amenable to lay censure. It is also necessary that he should be adequately paid by all classes according to their means."[1] The modern trading medical society is entirely subversive of these principles, and we call on Mr. Bryant to make good his words on the Council of the College.

I am, Sirs, yours faithfully,

Nov. 19th, 1898. W. G. DICKINSON.

RESECTION OF INTESTINE.

To the Editors of THE LANCET.

SIRS,—May I ask you to correct a slight error in the report in THE LANCET of Nov. 19th of the case I brought before the last meeting of the Clinical Society of London? The bowel removed measured 27½ in., not 24½ in. as stated.

I am, Sirs, yours faithfully,

R. CLEMENT LUCAS.

Wimpole-street, Cavendish-square, W., Nov. 19th, 1898.

"THE DIPLOMA IN SANITARY SCIENCE OF THE ROYAL UNIVERSITY OF IRELAND."

To the Editors of THE LANCET.

SIRS,—Dr. C. L. Birmingham has, in THE LANCET of Nov. 12th, directed attention to a defect in the title of the diploma in hygiene which the Royal University of Ireland offers to its own graduates and he cites, as a result of this defect, the interesting information that not one candidate has presented himself for that particular qualification during the past seven years. Certain it is that the title of "Diplomatist in Sanitary Science" savours very much of the qualification of a sanitary inspector and it is equally certain that it is not appreciated by Royal University medical graduates, who prefer to qualify elsewhere in public health. At the last examination for the D.P.H. of Cambridge at least 3 of the 14 successful candidates were Royal University men. Why should not the Royal University emulate Cambridge and hold D.P.H. examinations twice yearly, open to all qualified men who have completed the prescribed curriculum? As a young university it should be far more progressive and offer in addition degrees in hygiene to its graduates. Many who do not care about the "Diploma in Sanitary Science," so named, would be proud of a B.Hy. or a D.Hy. A gold medal offered annually would constitute an additional stimulus to the study of hygiene. There is an enormous amount of public health legislation demanded in Ireland and if its execution is to be efficient not only must great facilities be offered for the study of hygiene, but the universities must be alive to their duties and responsibilities in this matter. I hope that the Senate of the Royal University will earnestly consider Dr. Birmingham's suggestions. The Royal College of Surgeons is the only body in Ireland granting a D.P.H., but its examination should be raised to an average standard.

I am, Sirs, yours faithfully,

J. E. O'CONNOR, M.B. R.U.I., D.P.H. Cantab.

Lowestoft, Nov. 21st, 1898.

INQUEST FEES FOR HOSPITAL MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Will you kindly tell me in your columns whether I am entitled to a fee for attending an inquest under the following circumstances?

I am medical officer of a hospital and was ordered to appear at the coroner's court last Wednesday to give evidence as to the death of a child in the hospital, following an injury three weeks before. No fee was forthcoming, the coroner telling me that I was not entitled to one. I understand that the medical officers of infirmaries now get inquest fees in such cases, and I think my position is precisely the same as theirs, as I have to contribute to a superannuation fund under the Poor-Law Officers' Superannuation Act. I am, Sirs, yours faithfully,

Nov. 20th, 1898. A.M.O.

*** Medical officers of Poor-law infirmaries in the metropolis are entitled to fees for evidence, but medical officers of hospitals were left unaffected by the new arrangement of 1892 and are not entitled to fees for evidence. The Poor-law Officers' Superannuation Act does not affect our correspondent's position in this matter.—ED. L.

FEES TO PUBLIC VACCINATORS.

To the Editors of THE LANCET.

SIRS,—If any of your readers who are public vaccinators in the country have already come to an agreement with their board of guardians as to the scale of fees to be paid for work done under the new Act I should be greatly obliged if they would kindly furnish me through the columns of THE LANCET with the amount of such fees and as to whether postage is to be paid by the board of guardians or otherwise. I am, Sirs, yours faithfully,

Nov. 21st, 1898. PUBLIC VACCINATOR.

"THE ETHICS OF CLUB PRACTICE."

To the Editors of THE LANCET.

SIRS,—I agree with all "Constant Reader" says *re* clubs and club patients in THE LANCET of Nov. 19th. My way is to do exactly as I think best and show the club members that I care nothing at all for their opinions in any way whatever and if they do not like it they need not. I have little or no trouble; only once have I attended a meeting to reply to any complaint, and on that solitary occasion, after showing that the complaints were uncalled for and that I should always act in the same way, I tendered my resignation, but was at once met with a vote of confidence at the rate of 100 for to 4 against. It is the very worst thing to pander to any of the whims of club patients. I do my best, but I do it my own way, for all the clubs I have. I am, Sirs, yours faithfully,

Nov. 21st, 1898. ANOTHER READER.

VACCINATION AT CARDIFF.—At the meeting of the Cardiff Board of Guardians held on Nov. 12th it was decided, from January next, to act upon the advice of the Vaccination Committee and to appoint a medical man not engaged in private practice to act as public vaccinator for Cardiff under the new regulations provided by the Vaccination Act, 1898. At present there are three public vaccinators for the town districts of Cardiff. A letter was read at the meeting from the honorary secretaries of the Cardiff Medical Society, stating that in the opinion of the society it would be unwise to disturb the existing vaccination appointments.

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

SECOND YEAR.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1360.)

THERE are some features about the prevalence of typhoid fever in Belfast which, at first sight, seem somewhat puzzling and not in keeping with what might be expected. On closer examination, however, explanations of at least a plausible character may be obtained. For instance, on the west bank of the Lagan the older and low-lying quarters are more exempt than the higher and newer districts. These latter which stretch out on either side of the Shankhill- and Crumlin-roads seem to be more favourably situated. Also many persons have gone to higher levels so as to live on sandy soil and have suffered in consequence. There is much to be said in favour of sandy soil; but in a town like Belfast where, as it will be shown, the most cruel callousness has prevailed in respect to sanitation, it is far from safe. The fact that the soil was sandy and readily absorbed liquids has led to the greatest carelessness in the construction of drains. Indeed, in some instances it was found that no attempt had been made to connect private drains with the public sewer. After wandering some distance the drain stopped. The liquid matter would filter through the sand and it was only after a considerable time that the solid deposits accumulated to such an extent as to entirely block up the sewer. The nuisance became so urgent that the drain had to be dug up, and then only was it discovered that no connexion had been made with the sewer. Of course this could be rectified, but in the meanwhile the subsoil had become thoroughly contaminated. Apart from such gross defects as this, many drains and branch sewers have been unsatisfactorily constructed and are constantly leaking. Sand is an excellent filtering medium, it therefore retains on the spot the foul matter contained in the water of the sewage. This matter ferments, decomposes, and gives off effluvia, which readily ascend through the sand and are breathed by the inhabitants who pass or live close by. Thus a house built on sandy soil may be extremely unhealthy though it may be topographically speaking well placed. The houses in the lower part of the town which are apparently not so well situated rest on a plastic, blue, soapy clay which has some sand in it. The district is damp and waterlogged because it is barely above the high-tide level. On the other hand, the soil is not porous. Soiled water with its contents flows away. In any case such effluvia as may be generated underground cannot rise up through the clay. This fact is demonstrated when any gas-pipe gets out of order. The odour of the gas does not rise into the street. Eighteen inches of this clay soil seem sufficient to keep out the smell of the gas which, however, is noticed when this amount of the boulder clay has been removed from the spot where there is a leak in the gas-pipe. Now, many of the houses in the older part of the town, where at first sight it would be natural to expect that numerous cases of typhoid fever would occur, are built on this clay soil, and this may in a measure explain why, instead of suffering more, they have suffered less than other districts. Yet there are low-lying districts on both sides of the river, but more especially on the County Down side, where many cases of fever have occurred. It will, however, be found that for the most part the houses are here built not on the clay but on what was formerly hollow ground which has been artificially filled up not only with road sweepings but also with the foul contents of privies and ashpits.

Hence we may, with some degree of certitude, conclude that the incidence of typhoid fever is in part due to the contaminated character of the subsoil. But there are many other causes. There is notably the question of sewer ventilation. The high level main sewer is some 30 ft. below the street. It had to be constructed by tunnelling. Perhaps it was laid at this great depth so as to drain more distant districts which are at a lower level, but whatever may be the explanation the fact remains that this main sewer has become a tank sewer. For about sixteen hours in the day, instead of carrying the sewage right away to the sea, it gradually fills up. As the sewage accumulates in this locked-up sewer it must of necessity displace the air which the sewer contains and force it up into the town. When the state of the tide permits the discharge of the sewage into the salt waters of the Belfast Lough air is drawn down into the sewer. As the sewage has been stagnant for several hours heavy deposits must have been formed and the question arises whether the final but long-delayed outrush of the sewage is strong enough to remove these deposits. Even such deposits as are moved forward are stirred up in the process and must give up effluvia. With the effluvia the air which comes in to replace the water is freely mixed. It also comes into contact with the filth still adhering to the side and bottom of this great sewer. The air has every opportunity of being corrupted. Then the mouth of the sewer is closed, and as the sewage accumulates the air thus rendered foul is forced back into the town. The main sewers are, in fact, like a big lung which breathes in the air of the town for some four hours, pollutes it in every way, and then breathes it back again into the town for eight hours; thus the process is repeated twice in every twenty-four hours. The breathing, if it may thus be described, is sometimes much heavier than the normal, and then a much greater quantity of sewer air is forced up into the streets and houses. This is due to the accumulation not merely of sewage but of rain-water. If the rains are heavy not only is the main sewer filled but so also are many of the branch sewers. At times the volume of rain-water exceeds the holding capacity of the sewers and very disastrous floods ensue. By connecting little streams which drain outlying districts with the main sewers the probability and frequency of floods have been increased. The backwash thus occasioned has been known to flood the High-street, which, in spite of its name, is on the low level, and the water in this street has accumulated to the depth of 18 in.

Nor are floods occasioned only by the fact that the main sewers are not large enough to act as reservoirs capable of storing the rainfall of several hours. Some of the branch sewers are not large enough to carry away with sufficient promptitude an extra heavy rush of water. They therefore overflow. Thus, there have been floods even at an altitude of 90 ft. above the sea-level. On the other hand, these sewers, which at one moment are not large enough, are in normal weather far too large to be self-cleansing. For this purpose a sewer should be half full of water at least once in the day, so that the whole of the lower half of the circle or oval may be thoroughly swept by the water and all adhering deposits carried away. It was because these sewers were not sufficiently flushed that some of the small streams were conducted to them, and this arrangement is very useful in dry weather, but with very heavy rainfalls it may occasion floods. It will thus be seen that the main drainage scheme is altogether defective. Tide-locked sewers are absolutely indefensible, nor can the outfall be considered safe. It consists of a wooden shoot or trough. Piles were driven in on each side, but the ground was so unstable that the driving in of one pile would sometimes force out a neighbouring pile. This wooden trough is, so to speak, floating on a moist soil and is therefore very likely to become defective. Under these circumstances the whole of the sewage may not be carried out as far as is intended and thought desirable. In any case it is said that some cockle-beds on the coast near Belfast have been contaminated. Some of the cockles from these beds are very large but have a suspiciously black appearance. One curious fact may be noticed in this respect. There are not many Jews in Belfast, but the colony is compact. It consists for the most part of immigrants and refugees from Poland and Russia who are particularly strict in their religious observances. Consequently they never eat any shellfish and eschew with pious horror the allurements of the cockle stall. Now it is a remarkable fact that not one of these Jews has suffered from typhoid fever. Nevertheless it would not be safe to conclude that abstention from eating cockles is the only reason which can explain this favourable circumstance. The fact that in Russia they were bred and born amid the most insanitary conditions is more likely to have rendered them immune. This latter theory meets with some confirmation from the experience of the Christian population. It has been observed that the number of policemen who have suffered from typhoid fever is altogether out of proportion to the rest of the population. But, on the other hand, the policemen for the most part are not natives of Belfast. They generally come from country districts where more healthy

conditions prevail. Consequently they are not immune and readily fall victims to the poisonous atmosphere of the town. The same observation is made with regard to the civil population of Belfast. There are many more cases of typhoid fever among the new-comers than among the old inhabitants. This is a condition which will be found to prevail in several other towns where typhoid fever is endemic. The natives are comparatively free from the disease; while in the barracks the recruits from other districts and the strangers who come to the town readily contract the disease. At Belfast not only have the comparative strangers supplied a larger contingent of cases, but the proportionate rate of mortality, especially among the police, has been higher. The Constabulary force in Belfast numbers about from 700 to 800 men. One of the barracks stands on bad soil; still in many respects the men lead healthier lives than a large part of the population and physically they are an exceptionally fine set of men. It does seem, therefore, that they have suffered because they are not accustomed to the unwholesome surroundings of town life. They have not been in the habit of breathing the air which the rising waters in the sewers force up into the streets. They have not lived on soil partially formed of the contents of privies or contaminated with organic matter which has escaped from leaking drains. These are conditions which even a stalwart Irish constable cannot always resist.

Nov. 21st.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Native Practitioners and Inoculation for Plague.—The Progress of the Epidemic.—The Native Chiefs' Institute of Public Health.—The Plague Commission.

THE present position of prophylactic inoculation for plague has been recently discussed at a meeting of the Bombay Medical Union. This is a large society composed entirely of native medical practitioners, and the subject was brought forward on purpose to discuss the strictly scientific aspect of the question. M. Haffkine attended and answered numerous inquiries concerning the results as well as the technique of the process. Although the statistics are very satisfactory they were not accepted by many members without cavil, and several evils were attributed to the operation, although not on very good grounds. The chief figures have been already published. The chairman, however, gave some statistics which went to show that those who were inoculated more than once enjoyed greater immunity from attacks of plague than those who were only once inoculated. The importance of the assistance of the native qualified medical practitioner in furthering the process of inoculation is very great, especially as the process can hardly be said to have "caught on" in Bombay. It is therefore satisfactory to know that the following resolutions were passed at the meeting :—

1. This meeting is of opinion that considering the data now available and the satisfactory result of the observations collected regarding the protective effect of Professor Haffkine's plague prophylactic the time has now arrived for the profession to make a definite pronouncement on the subject and invite the public to resort freely to the protective treatment as the only safeguard against plague. 2. The immunity derived from inoculation when done with a full dose appears to last for at least six months, but there is the possibility of its lasting much longer. 3. From the observations collected lately it appears that a second inoculation done ten days or so after the first further reduces the incidence of plague in those who resort to inoculation, and it is likely that a third inoculation, if such be practicable, would increase the immunity still further. The public are therefore invited to resort to at least two inoculations and even to a third if practicable. The duration of protection is also likely to be enhanced by such a repetition. 4. This meeting of medical men who have had a wide experience of inoculation in persons of all positions, ages, and constitutions, declares emphatically that rumours of inoculation originating different diseases, such as leprosy, syphilis, &c., are devoid of any foundation; that, considering the nature of the prophylactic which does not contain any living germ, such an eventuality is absolutely impossible; and that there are no facts to show that inoculation aggravates any existing ailments despite the rare and isolated instances which may at first suggest such an idea.

I hear that inoculation has been so popular in the Dharwar District that it has been found possible to make a small charge towards covering the cost of the operation The following figures are very suggestive. Up to Oct. 21st there were in Dharwar town :—

	Persons.	Attacks.	Deaths.
Once inoculated	5712	69	31
Twice inoculated	3349	9	5
Uninoculated	5614	957	756

The flight of large numbers of the people, and these almost entirely of the uninoculated, gives the impression of greater virulence than the figures actually warrant, but even if the percentage were reduced to half it would still indicate the enormous value of these inoculations.

The decline in the plague mortality in Bombay city continues and expectation that the third outbreak was an abortive one and practically over finds confirmation. The weekly mortality has now almost descended to its normal number. There is also a decline in the virulence of the epidemic in other parts of the Presidency. During the previous week there were over 5000 deaths from plague but this has been reduced by nearly 500. The week's totals of 5927 cases and 4651 deaths, however, hardly attract the attention such a mortality demands. The continuance of occasional cases in Karachi is very suggestive, and amongst other things points to the probability of a recrudesence in the near future. Immense improvements have, however, been made in the sanitary condition of the city, so that the chances of a return of the epidemic in its former virulence are much diminished. The occurrence of 2 cases in the Punjab after a long interval of apparent cessation is very disquieting. The immense processes of scavenging, disinfection, and general cleaning up which have been accomplished in consequence of the plague have been in numerous places blessings helping to compensate for the disasters of the disease.

The proposed Indian Pasteur Institute languishes partly from want of funds and for this reason it has been decided by the central committee that any attempt to start an institution for the sole purpose of antirabic treatment was out of the question. Fortunately, the Native Chiefs' Institute of Public Health is likely to take practical shape. It is reported that over twenty lakhs of rupees have been collected for the health scheme, which will include the Pasteur treatment. We seem, therefore, to be within measurable distance of the establishment of the long-looked for institution—the absence of which is a discredit to Indian medical administration

I have referred to the mild but equally effective measures now adopted in Bombay as compared with the policy of the late Plague Committee. The Commissioner has lately submitted an outline of the measures which are now in progress for dealing with the plague. In the detailed instructions issued to the district officers considerable latitude is allowed in the direction of relaxation. In addition to the general measures—viz., removal of the sick to hospitals, observation of "contacts," and evacuation and disinfection of affected houses—particular attention is paid to the following points. Inoculation is being encouraged (this, however, has barely affected one-thirtieth of the population); rats are being destroyed; arrangements have been made for the local preparation of Lustig's serum (not yet shown to be of much value, however); the different communities are being assisted to form health camps and hospitals of their own; arrangements have been made for tile-turning; and a systematic survey of houses is being made with a view to their sanitary improvement. In addition passes and detention camps for travellers by railway have been abolished. It must be noted that all the measures now in force depend upon the assistance of the native volunteer committees—the object being to discover plague cases. There is no hesitation in saying that the object is only very partially achieved, but some of the measures are doubtless effective and the general plague administration works much more smoothly than before.

Nov. 5th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Proposed Hospital in Liverpool for Chronic Diseases of Children.

A NUMBER of ladies and gentlemen interested in the promotion of a hospital for the treatment of the chronic diseases of children on open-air lines in the vicinity of

Liverpool held a meeting at the Deaf and Dumb Institute on Nov. 17th. The chair was taken by Dr. William Carter. Dr. C. J. Macalister, in strongly advocating such an institution, wished it to be understood that it must not be confused with a convalescent institution but must be conducted on the lines of a hospital, suitably placed and providing for a long period of residence on the part of the patient. It should not be affiliated with any special hospital, as that would practically limit the recipients of its benefits to the patients of that particular charity. Mr. Robert Jones also strongly urged the claims of such a hospital and said that in this matter we were far behind our continental neighbours. The argument that our climate was unfitted for open-air treatment no longer carried weight. It was necessary that children should be treated under the best hygienic conditions, and these were only to be found in the country. Having occasion to visit a small French village near Boulogne he had been much interested in visiting three hospitals there which were built for children, one containing 1000 beds, another 300 beds, and another 30 beds. The convalescent home was of incalculable benefit as an annexe of city hospitals, but it did not fulfil the *rôle* of a hospital in the country where cases could be taken in to be cured and where no time limit would be prescribed, and where the prevention of deformity would be the aim. A resolution was unanimously carried "that a committee be formed for giving definite details of the scheme and for furthering the object of the meeting."

The Royal Southern Hospital: Annual Dinner; Proposed School for the Study of Malaria.

The ninth annual dinner in connexion with this hospital was held on Nov. 12th at the Exchange Station Hotel. Dr. William Carter, in his reply to the toast of "The Royal Southern Hospital," claimed for the hospital priority in Liverpool in accepting the antiseptic principles enunciated by Lister. He also alluded to the special opportunities enjoyed by the hospital for the treatment of malarial diseases, a fact recognised by the Government in subsidising six beds for such cases after the late Ashanti war. Principal Glazebrook of University College, in responding to the toast of "The Visitors," advocated the establishment by the Government of a school in Liverpool for the study of malaria. From its connexion with the West Coast of Africa Liverpool was more likely to have such cases than even London, near which, at the Albert Docks, the establishment by Government of such a school was contemplated. One of the guests at the dinner, Mr. Alfred L. Jones, has offered £400 to start a school in Liverpool for the study of malaria.—The Lord Mayor and members of the city council were present in state at St. Michael's Church on Sunday, Nov. 20th, when a sermon was preached by the Dean of Norwich on behalf of the Royal Southern Hospital. The collection amounted to £121 18*s.* 5*d.* The committee contemplate the expenditure of £3000 on new boilersand machinery and additional bed-room accommodation for the staff.

Pathological Diagnosis Society.

Professor Boyce and Dr. W. B. Warrington entertained the members of the Pathological Diagnosis Society at a conversazione in the Thompson-Yates Laboratories on Nov. 2nd. The reunion was suggested by the transference of the work of the society from Ashton Hall to new premises in the Thompson-Yates Laboratories, where a spacious room has been fully equipped for carrying on the research work of the society. During the past six months Professor Boyce and his assistants have examined and reported upon 398 morbid specimens, sputa, &c., which work has been of incalculable benefit to busy practitioners who have not the time and means at their disposal to make the examinations themselves. The membership of the society has now reached 110. The annual subscription has been increased to 10*s.* 6*d.*

University College, Liverpool: Medical Students' Annual Dinner.

The medical students' annual dinner was held on Saturday, Nov. 19th, at the Adelphi Hotel, under the chairmanship of Dr. James Barr, physician to the Royal Infirmary. Upwards of 120 gentlemen sat down to dinner. The proceedings were of the most agreeable and harmonious character, the speeches being short and the merriment great. The annual dinner is looked forward to with much eagerness by both past and present students, the former seizing the occasion for the renewal of old acquaintanceship.

Liverpool Biological Society.

Professor Sherrington, F.R.S., read an interesting paper, with lantern illustrations, before the members of this society in the zoology theatre, University College, on "Adaptation to Function as Exemplified by the Structure of the Arm." Modern men of science were asking how, not why, and were trying to ascertain how, an organ was made for its particular purpose. At first when the great German Helmholz pointed out that the eye *per se* was imperfect as an optical instrument his declaration was considered impious. The lecturer thought that there was nothing impious in it as an attempt to answer how the extraordinary perfection of vision was achieved with the aid of the brain. Professor Sherrington's experiments were devoted to the same question in regard to the human arm. As the result of extensive work in the laboratory he had found that the further one succeeded in unravelling the structure of the arm the more marvellously adapted to its uses one found it to be, and the more multiplied its adaptabilities.

The Children's Convalescent Home, West Kirby.

The applicants for admission to this institution have been so numerous that the committee have decided to erect a new wing at a cost of £5000, of which a great part has already been subscribed. Last year 832 children were admitted, the greater proportion of whom were sent from Liverpool and its suburbs.

Donations to the Chester Infirmary, &c.

The Chester General Infirmary has received £500, and the Parkgate Convalescent Home £30, from the Duke of Westminster, being the proceeds of the fees paid by visitors for admission to Eaton Hall during the past summer.

Nov. 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Reception at the Royal College of Surgeons, Edinburgh.

INVITATIONS have just been issued by the President of the Royal College of Surgeons and Mrs. Chiene to an "At Home" in the College on the evening of Friday, Dec. 9th. A similar reception was given at the Royal College of Physicians some years ago and was by many regarded as a more satisfactory kind of entertainment than the annual dinner.

Illness of Professor Struthers.

I regret to say that Sir John Struthers for some months has been on the sick-list although able to move about a little and to attend to some of his public duties. Last summer he started on a tour to Norway, but had no sooner crossed the North Sea than he deemed it desirable to return. He is now quite confined to his house and in the case of a man of his indomitable spirit this means, I fear, that his condition has become worse.

Complimentary Supper to Dr. Muir.

To-morrow, Wednesday, Nov. 23rd, Dr. Robert Muir is to be entertained to supper by the members of the Edinburgh Pathological Club. This complimentary entertainment is on his appointment to the St. Andrews Professorship of Pathology in Dundee and in recognition of his services as secretary to the club for some years.

Glasgow University.

The University Court has agreed to recognise for purposes of graduation in medicine the lectures of Dr. Hugh Galt on Forensic Medicine and Public Health at St. Mungo's College, Glasgow; the lectures of Dr. W. Ernest Thomson on Physiology at Anderson's College Medical School, Glasgow; and the lectures of Dr. Robert A. Fleming on Medicine at the School of Medicine, Edinburgh. Mr. Matthew Arthur and Mr. Alan E. Clapperton have been appointed to represent the Court on the board of managers of the Western Infirmary.

Faculty of Physicians and Surgeons, Glasgow.

At the annual meeting of the Fellows held at the oeginning of the present month Dr. Hector Clare Cameron was re-elected president; Dr. A. L. Kelly, visitor; Dr. James Finlayson, honorary librarian; and Dr. J. D. Maclaren, treasurer. The Examining Board for the Licence in Dentistry has been reorganised and Mr. H. E. Clark has been appointed one of the examiners. Much interest was exhibited in the appointment of two representatives to the managing board of the Western Infirmary, and after a contest Dr. Archibald Sloan was re-elected and Dr. Bruce Goff was appointed in place of Dr. J. B. Russell, who desired to retire on account of his removal to Edinburgh. Professor Ralph Stockman, M.D., F.R.C.P. Edin., has been admitted a Fellow of the Faculty.

Royal Hospital for Sick Children, Glasgow.

Dr. George S. Middleton has been appointed visiting physician to the hospital in succession to Dr. James Finlayson, who has resigned. Dr. Finlayson has been one of the physicians since the establishment of the hospital and the directors have now elected him honorary consulting physician.

Glasgow University Club, London.

The club gave a very successful dinner party in the Café Royal, Regent-street, on the evening of Nov. 18th. The Very Rev. Principal Storey occupied the chair, and in proposing the toast of "The Club" took occasion to refer to the recent changes instituted in the Scottish Universities by the late Commission. He regarded the present day as the commencement of a new era in University development and insisted upon the necessity for an increase of funds if the new claims now made upon them were to be adequately met. He trusted that the influence of the members would be of value in this direction, and pointed out that it was specially necessary that the University should be able to increase its laboratories, both for the extension of practical teaching and the encouragement of research. The medical members sent a strong contingent, which included Dr. Heron, Dr. Brisbane, Mr. David Donald, Dr. Guthrie Rankin, Dr. C. O. Hawthorne, Dr. C. D. F. Phillips, and Dr. Norman Maclehose.

University of Aberdeen.

The portrait of the Marquis of Huntly, Lord Rector of the University, painted by Mr. J. Coutts Michie, A.R.S.A., and presented by him to the University, has now been received at Marischal College.—An opportunity has been afforded to the lady students of seeing the proposed home at Aberdeen for the women students there.

Aberdeen Hospitals.

Entertainments are to be held on Sundays in the Palace Theatre for the benefit of these institutions.

Nov. 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dublin University Biological Association.

THE opening meeting of the session will be held in Trinity College, when the President, Dr. William S. Haughton, will deliver the inaugural address on the Present Position of the Roentgen Rays in Surgery and Medicine.

Health of Belfast.

The death-rate for the week ended Nov. 12th from all causes was 26·9 and from the principal zymotic diseases 2·4. The number of cases of typhoid fever notified during the same period has been 47, as compared with 72, 98, 125, 149, 151, and 172 for the six previous weeks respectively. These statistics show that the outbreak of typhoid fever is still, fortunately, subsiding. At a meeting of the Public Health Committee, held on Nov. 17th, the estimates of the probable expenditure for the year 1898 were considered and very fully discussed, and it was found necessary to provide for an expenditure greater than that of the present year by several thousand pounds, the house-cleaning department and the new drain-testing scheme, recently passed, contributing the larger portions of the increase. The very long distances to which the house refuse has now to be carted and the increasing difficulty of finding outlets for it—in which connexion the growth of the city will be responsible for great expenditure—point conclusively to the necessity of refuse destructors being provided for the several districts and also to the desirability of the utilisation of the tramway system for the conveyance of this material to places of disposal where it can be rendered innocuous.

The Annual Dinner of the Cork Medical and Surgical Society; Important Pronouncement with regard to the University Question.

The annual dinner of the Cork Medical and Surgical Society took place at the Imperial Hotel, Cork, on Nov. 12th, when the number of members and their guests amounted to over fifty. Amongst the latter were the Mayor of Cork, Mr. Maurice Healy, M.P., Sir Rowland Blennerhassett (President of the Queen's College), Sir John Scott (ex-Mayor of Cork), Mr. M. D. Daly (chairman of the Cork Dispensary Committee), and other prominent citizens. Dr. Edward Magner, president of the society, occupied the chair, and by delegating to others the duty of proposing some of the toasts introduced what proved to be a very successful novelty. Mr. Healy, M.P., proposed the toast of "The Cork School of Medicine," and in doing so delivered an important speech which is likely to have results. He mentioned that when the Local Government Bill was passing through Parliament he had urged that the Cork hospitals, being part of a successful school of medicine, should be treated more generously than the majority of county infirmaries in Ireland, and though he was not as successful as he could desire he was happy to say that some concessions had been granted. He alluded in complimentary terms to the status of the Cork medical profession and said he was aware that the teachers of the Cork School of Medicine kept well abreast with the wonderful progress of medical science. Touching on the education question he said that addressing such an audience he had no desire to deal with the political aspect of that complex problem, though he had no doubt his opinions on the subject were well known; but one thing he would say with the greatest emphasis—and that was that no solution would be acceptable to him which would have for its purpose the destruction of the Cork School of Medicine and the transference to Dublin of the grant of money now given to Cork. If such a contingency should possibly occur he would regard it as a catastrophe, not alone for his own constituency, but for the whole of the south of Ireland. Mr. Healy was listened to with the greatest attention and when he resumed his seat there was enthusiastic applause. There is no doubt that the sentiments expressed by Mr. Healy will, if occasion require, be emphatically endorsed by his constituency and urgently and persistently pressed on the consideration of any Government that may undertake the solution of the Irish University question. Afterwards Dr. Magner proposed the toast of "The President and Professors of the Queen's College." Sir Rowland Blennerhassett, when replying, stated that one of the first universities known to history was practically a medical school, and the ordinances of that university were so excellent that one of the most modern universities, that of Strasburg, practically adopted them in their entirety. Referring to the pleasure with which he had listened to Mr. Healy's speech he said he felt quite sure that not alone he himself but all the professors had but one desire—to make the Queen's College, Cork, as useful as possible to the community in the midst of which they lived. The President of the society then proposed the toast of "Our Guests" and coupled with it the name of the mayor. He referred to the exertions of his Worship when mayor some years ago to settle the dispute between the local profession and the clubs and said the mayor's sympathies were with the medical men of the city. The Mayor, in reply, expressed the gratification it had been to him to be present at the annual dinner of the society each year he had been mayor, and referring to the club fight said he never could understand how it was that the tradesmen of the city, themselves members of trades union associations, could give opposition to the demands of the medical profession, which were moderate and reasonable. In reply to the toast of the "Navy and Army" Colonel Riordan, R.A.M.C., referred to the sympathy of the profession at large in the desire that the status of his brethren should be improved. Brigade-Surgeon Moriarty, M.D. R.U.I., in

very felicitous terms proposed the toast of the "South of Ireland Branch of the British Medical Association," and it having been duly honoured a most enjoyable evening came to a conclusion, music and song forming an attractive portion of the programme.

Curious Order issued at the Cork Barracks with Reference to the Attendance of Civilian Practitioners on the Families of Non-Commissioned Officers.

Recently a medical man practising in Cork was requested to see the child of a sergeant of the King's Royal Rifles. On arriving at the barracks he ascertained that the child was under the care of one of the military medical officers, and accordingly sent a message to him requesting him to see the child in order that they might have a consultation with regard to the case. The military medical officer could not be found as he happened to be out of town, and as the civilian practitioner ascertained that the little patient was very seriously ill he considered it desirable to prescribe for the child. He then wrote explaining his connexion with the case and requesting the military medical officer to meet him in consultation on the following morning. The latter replied declining to do so, as the parents had treated him discourteously by not previously intimating to him their desire to have a consultation, and added in very friendly terms that he had no doubt the civilian practitioner had acted entirely in accordance with professional etiquette. Soon afterwards the same civilian practitioner was requested to visit two other children in barracks and found one of them suffering from a severe attack of septicæmia. The parents were very anxious about the condition of the child and pressed the medical man for a diagnosis. He informed them that it was a case of blood-poisoning. The commanding officer, who was much interested in the child, on hearing of the nature of the illness requested the medical man to send him a report and he courteously acceded to his request. Some days afterwards a board, consisting of medical and engineering officers, held an inquiry, but what the result of the inquiry was has not transpired, but it is understood that the question of the child's illness being produced by insanitary surroundings was before them. Whether it was a case of *post hoc, propter hoc* cannot be ascertained, but almost immediately afterwards an order was issued applying to the whole military district of the south of Ireland that in future non-commissioned officers and privates desirous of procuring the services of civilian medical practitioners must intimate the fact to the commanding officers of regiments in order that it might be communicated to the military medical officer on duty. In the interests of military discipline it may be necessary to issue an edict of this kind, but if so why should it not be made to apply equally to the families of commissioned and non-commissioned officers. Is it as true now as in the days of Shakespeare that what is a mere idle word when uttered by an officer is rank blasphemy when coming from a private? It is stated that the quarters in which the child suffering from septicæmia resided were built on ground contiguous to, if not actually on, the site of closets which had probably been erected at a time when little was known of sanitary science. It has been ascertained, too, that former occupants of the same house were attacked by diphtheria.

Outbreak of Diphtheria in Monaghan.

An outbreak of diphtheria, so far not of a very serious nature, has taken place in Monaghan. The medical men are using every effort to stamp out the disease by isolating the cases, and the schools have been closed up to Jan. 14th, 1899.

Outbreak of Fever at Ballymena.

An outbreak of typhoid fever has occurred at a place called Bridge End, Ballymena, and there are now 15 cases in the Fever Hospital, one patient having died. The Local Government Board has instructed their medical inspector, Dr. Clibborn, to hold an inquiry into certain statements made by the matron of the Workhouse Hospital as to the manner in which cases of fever were treated in the hospital.

Nov. 20th.

DIPHTHERIA AT OLDBURY.—At the meeting of the Thornbury Board of Guardians held on Nov. 11th the medical officer of health (Dr. Bond) reported that 11 cases of diphtheria had been notified during the past two weeks, 10 of these cases having occurred at Oldbury.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Operations for Disease of the Stomach.

DISEASES of the stomach have of late occupied the attention of the learned societies. At the Academy of Medicine on Nov. 15th M. Charles Périer showed a woman, aged fifty-three years, from whom one year ago he had removed the whole of the central portion of the stomach together with the centre of the transverse meso-colon for a new growth which was of about the size of the palm of the hand. After the annular excision had been performed the two ends of the stomach were entirely separated the one from the other. They were joined together by a double row of sutures reinforced externally by a strip of omentum. The colon was found to be enormously distended with fæces, and M. Périer and his assistants were able to manipulate these into the sigmoid flexure and thence into the rectum. Three days afterwards all this mass was removed by means of injections. As long as the mass remained in the intestine the state of the patient was very grave, but after the bowel had been cleared out her state improved and the improvement was continued uninterruptedly until she had completely recovered. M. Périer lays great stress upon this, for he considers that similar retention of fæcal matter is in great measure to blame for the want of success which has hitherto attended gastro-enterostomy and that a favourable result should certainly be brought about if the intestine be emptied in this way. At the present time the patient's appetite is good and digestion is easily performed. Her weight has gone up 15 kilos. since the operation and within the last month she gained 1 kilo. No tumour whatever can be felt in the abdomen and great attention is paid to keeping the bowels regularly open.—At the meeting of the Society of Surgery held on Nov. 9th M. Terrier reported that he had performed jejunostomy for a very extensive case of cancer of the stomach where resection and gastro-enterostomy were out of the question. The patient was now being fed by the intestinal fistula. The operation, however, is only practicable in very few cases. M. Terrier followed the operative technique laid down by Sursnay—an operation which he has performed twice. It is the best operation of a palliative kind, not difficult, and often prolongs the life of the patient.

The Organisation of the Medical Congress of 1900.

The Organising Committee, with Professor Lannelongue in the chair, held a sitting on Nov. 5th at the Academy of Medicine and has definitely settled arrangements for the congress which will open on August 2nd, 1900, and close on the 9th. The entrance fee, amounting to 25 francs, can either be sent to the general manager at Paris or to the committees who are acting in foreign countries. Every subscriber will receive a document showing the extent and arrangement of the section in which he is interested. The congress is divided into five sections: A. Biology: (1) anatomy, descriptive and comparative; (2) histology, embryology, teratology; (3) physiology, physical and biological chemistry; and (4) anthropology. B. Medicine: (1) general and experimental pathology; (2) bacteriology and parasitology; (3) pathological anatomy; (4) visceral pathology; (5) medical diseases of children; (6) therapeutics and pharmacology; (7) nervous diseases; (8) mental diseases; and (9) dermatology and syphilology. C. Surgery: (1) general surgery; (2) surgical diseases of children; (3) surgery of the urinary organs; (4) ophthalmology; (5) laryngology and rhinology; and (6) otology. D. Obstetrics and Gynæcology. E. State Medicine: (1) hygiene, sanitary medicine, and epidemiology; (2) forensic medicine; and (3) military medicine and surgery, naval medicine and surgery, and colonial medicine. Two general meetings will be held, the one on the opening day of the congress and the other at the end. Only those members nominated and invited by the committee will be able to read papers. All proposals relative to the work of the congress must be handed in to the committee before May 1st, 1900. The committee will decide upon these and reserve to themselves the right of examining into their claims. No communication must

exceed fifteen minutes in length and speakers in the discussions must not exceed five minutes. The text of the papers or communications or discussions must be given in the same day to the secretary of every section. French is the official language of the congress, but English and German may be also employed in the general meetings and in the sectional meetings.

Hysterical Gastralgia.

At a meeting of the French Electro-therapeutical Society, held in Paris on Nov. 17th, Dr. Apostoli and his assistant, M. Planet, made a communication relative to a case of severe hysterical gastralgia of ten years' standing. It had been suspected to be of tabetic origin but disappeared under treatment by static electricity (*franklinisation*). Static electricity supplies a valuable means of differential diagnosis between hysterical gastralgia and the gastralgia which is an early symptom of incipient tabes. It very quickly detects hysterical conditions by demonstrating peripheral perversions of sensibility, and when applied sufficiently long it has a beneficial effect on hysterical gastralgia.

Nov. 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Vaccination.

THE Senator Dr. Giulio Bizzozzero (whose work in the histology of the circulation won him an honoured name in medical science and led to his appointment to the chair of Pathology in the University of Turin) was the principal speaker at the last meeting of the Turinese Society of Practical Medicine convened in the Policlinico of that city to discuss the all-important question of vaccination and the duties which it imposes on State and citizen alike. Mournful to relate, Italy has, this time for the worse, been influenced by the example of England to relax her faith in the grand Jennerian prophylactic, and at the instance of a man of whom better things were expected, Professor Carlo Ruata of the University of Perugia, to deny the State the right of making vaccination obligatory, on the grounds (mainly) that isolation suffices to keep small-pox at bay, without entrenching on the liberty of the subject. Professor Bizzozzero began by observing that we cannot now as erewhile believe that vaccination can give a life-long immunity from small-pox. If we reflect that out of 1000 vaccinated persons 910 or 920 after eight or ten years are once more accessible to revaccination, there is manifest proof that the immunity is not for life. Proceeding to answer the question, "Are there in Europe nations which are really well-vaccinated?" he remarked that in England vaccination being entrusted to Poor-law guardians (who are not medical men) is carried out by them according to their lights, while revaccination is not obligatory. France, Belgium, and Spain have not obligatory vaccination. On the other hand, Germany stands alone in fulfilling in great measure the demands of hygiene, having in consequence of the calamitous small-pox epidemic of 1870–71 enacted the law of 1874 which "makes vaccination obligatory in the first year of life and revaccination also obligatory at the tenth year." What was the result? With a population of 50,000,000, having in 1871 lost 143,000 lives by small-pox, she found by her law of 1874 the mortality diminished so rapidly that to-day the disease numbers only 116 victims a year. These cases, moreover, occur almost exclusively in towns on her frontier. If it were true, continued Professor Bizzozzero, that a good vaccination does not protect from small-pox we ought to find in small-pox epidemics that the disease diffuses itself in the well-vaccinated no less than in the non-vaccinated countries. But it is not so. In 1870–71, during the Franco-German war, the two peoples interpenetrated each other, the German having its civil population vaccinated optionally but its army completely revaccinated, while the French (population and army alike) were vaccinated perfunctorily. Both were attacked by small-pox; but the French army numbered 23,000 deaths by it, while the German army had only 278; and in the same tent, breathing the same air, the French wounded were heavily visited by the disease while the German wounded, having been revaccinated, had not a single case. These figures made a profound impression on Professor Bizzozzero's audience, as well they might. Coming to Italy, the anti-vaccinationists assert that the country is well vaccinated; and yet, in spite of that, in 1887 there were 17,000 deaths from small-pox, the majority of them infants in whom immunity ought to be at its best. In reality, however (continued Professor Bizzozzero), Italy was always an ill-vaccinated country, revaccination not being obligatory as it is in Germany. Moreover, it has been demonstrated that of the children vaccinated only one-third are in their first year; no wonder, then, if the two-thirds not vaccinated till after that year contribute to swell the death-rate. Again, the anti-vaccinationists contend that obligatory revaccination as in Germany has not wrought the well-nigh complete disappearance of small-pox, but the decree of 1883 as to isolation of the small-pox patient, together with the relative disinfection. They forget, rejoins Professor Bizzozzero, that that decree is in force only in Prussia, and that in the other German countries it is not in force at all, while in these, thanks to obligatory revaccination only, small-pox is well-nigh unknown. In conclusion he said: "Our own experience reinforces that of other countries in placing beyond doubt the efficacy of vaccination when not disjoined from revaccination. Let us then persevere in the struggle for a cause so sacred!" The meeting was all but unanimous in approving Professor Bizzozzero's address; while the anti-vaccinationist minority was but poorly represented and its familiar arguments had all been anticipated and refuted. Dr. Belfanti, director of the Istituto Sieroterapico of Milan, gave evidence as to the inefficacy of isolation supplemented by disinfection, and proved that revaccination had well-nigh stamped out small-pox in the Lombard capital. Dr. Ramello, director of the Municipal Office of Hygiene (Turin), contributed a most instructive history of vaccination in Piedmont from 1805 as a conclusive demonstration of the efficacy of vaccination followed by revaccination, and his facts and figures were supplemented by Professor Pagliani of the Direzione della Sanità Pubblica, showing analogous experience during the last decennium. The meeting shortly afterwards rose, having voted unanimously the following order of the day: "The Society of Practical Medicine considering: (1) that vaccination and revaccination are the only available and effective means of preventing the diffusion of small-pox; (2) that these operations present not the slightest danger when performed *secundum artem*; (3) that not only do they not present any danger during an epidemic of small-pox, but are the only means of arresting such epidemic; (4) that small-pox is almost unknown in countries practising regularly vaccination and revaccination; (5) that therefore this disease ought entirely to disappear from civilised countries; and (6) that we have in animal vaccine a pure source of vaccine which gives absolute security and can meet every eventuality—resolves that the Istituto Vaccigeno of the State be reopened, while also keeping open those other institutes which guarantee the good preparation of vaccine; and that, by the best means possible, there should be promoted the most effective carrying out of the legislative arrangements now existing concerning vaccination, revaccination, and animal vaccine."

Honour to a Medical Man.

The Senate has just been reinforced by a considerable number of new members, all of them more or less distinguished in public or professional life. General satisfaction is expressed at the elevation to the Upper House of Dr. Enrico De Renzi whose work on the serotherapy of pneumonia[1] is the last of a long series of original and practical contributions to clinical medicine. Born in 1839 in Campania, Dr. De Renzi graduated after a brilliant course of study in the Neapolitan school, and while still a very young man competed successfully with formidable rivals for the Chair of Practice of Physic in the University of Genoa. He shared in the patriotic movement which resulted in Italy's unity and independence and served on the medical staff under Garibaldi in more than one campaign. In 1884 he did useful and intrepid work in the calamitous cholera epidemic in Naples, having previously distinguished himself in tracing the cause and effecting the cure of the strange form of anæmia which proved so fatal to the workmen employed in tunnelling the St. Gothard. Recalled to his *alma mater* to fill the Chair of Clinical

[1] THE LANCET, Oct. 22nd, 1898, p. 1075.

Medicine and to act as supplementary professor of pathology, he wrote his well-known treatise on Cirrhosis of the Liver, and has of late been actively engaged in the study of thoracic ailments, chiefly with a view to their treatment by sero-therapeutic methods. He sat in Parliament for the constituency of Avellino, having been elected in 1888, and was for years one of the most useful members in the promotion of public hygiene and in the legislation directed towards the reafforesting of Italy.

Nov. 20th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

The Medical Report on the British Troops in 1897.

CONSIDERABLE sanitary improvements have taken place in the barracks and hospitals, for it is only during the last few years that intelligent interest has been aroused in the drinking supply of the troops. For the first thirteen years of the British occupation the water from the lavatories and laundries of Kasr-el-Nil barracks was allowed to drain into the Nile just above the intake of the water company of Cairo. But now for three years percolating cesspits have been provided and are found to work very well, even when the Nile and the subsoil water are at their highest. The level of the Kasr-el-Nil barrack square has been raised 2 ft., well above the annual infiltration level, and now it is no longer necessary to send the regiment quartered in those barracks into the desert during the months of September and October. At Abbasiyeh a comprehensive drainage system has been laid down and it works well. Last year's figures show that the sanitary reforms are already bearing fruit. The average of sick during 1897 in all Egypt was 54 per 1000, as compared with 63, which was the figure in the two previous years. The actual number of admissions to hospital was 3242, out of an average annual strength of 4449. The death-rate of Cairo alone was 8 per mille less than in 1896. The chief sickness of the year occurred in a regiment which came direct from Malta to Alexandria and had many cases of Mediterranean fever. The highest figures for sick troops occurred, as usual, among young men at the ages of from twenty to twenty-five years. There were 3 cases of small-pox, 1 of scarlet fever, and 6 of diphtheria. 520 cases were returned as "simple continued fever," a term covering many cases of Mediterranean fever and perhaps a few of mild enteric fever. Of the 30 cases of enteric fever 8 patients died; this very high ratio is probably due to the fact that many of the men do not report themselves sick until the disease is far advanced. In 1896 there were 50 cases returned as "enteric" and 10 deaths. It is almost impossible to decide for certain where the soldier gets his typhoid fever, but everyone agrees that it is generally out of barracks. However, the principal medical officer draws attention to the fact that 4 cases occurred among the Royal Engineers all quartered in one portion of the barracks and all admitted to hospital within a period of four days. This certainly seems suggestive of some temporary contamination of the local drinking-supply. Nearly all the cases of enteric fever during the twelve months occurred in men who had been less than one year in Egypt. The enteric fever cases included 2 officers, 1 child, and 1 sergeant's wife. There were 66 cases of dysentery but only 2 deaths. Four officers died and 7 were invalided. The women furnished 266 admissions (51 being normal confinements) and 5 deaths out of an average strength of 216. The children's figures were: average strength, 375; admissions, 618; and deaths, 26, of which 12 were entered as due to dentition or diarrhœa.

The Nile Expedition, 1898.

I have been favoured with copies of the printed advice as regards sanitation issued to all commanding officers and medical officers of the force. The latter were all furnished in addition with "Notes on Medical Services in War" by Colonel Macnamara, R.A.M.C. Special advice is given about drinking water and the advantages of the Pasteur filter, one of which was provided for each unit, were very clearly recognised. Colonels were reminded that a good deal can be done towards training men to abstain from drinking or to drink only small quantities while actually on the march. It is well known that the tyro from sheer nervousness empties his water-bottle in the desert within the first hour of leaving the Nile bank. The hints as regards personal cleanliness include special counsel with regard to care of the eyes. Instructions are given to disinfect beds, stretchers, and railway-carriages which have been fouled by cases of dysentery or enteric fever. Lord Wolseley is quoted as writing that during a campaign provision should be made for twice the ordinary sick-rate of soldiers in the country. This would be about 8 per cent., and to this must be added 6 per cent. of wounded after a severe action. Every medical officer is recommended to have for use in action a strong clasp-knife, morphia solution for hypodermic injection, tabloids of various medicines, antiseptic dressings, and brandy. His orderly should carry more brandy, milk, and beef-tea.

The Quarantine Board.

Dr. Armand Ruffer will leave Alexandria to-morrow to join Professor Fraser of Edinburgh and Professor Wright of Netley as the third member of the Plague Commission. He was specially applied for by the Indian Government a month ago, but it seemed at first impossible to spare him because there was no one on the Quarantine Board qualified to act as president during his absence of six months. Eventually the difficulty was overcome by Dr. Ruffer resigning and by Captain Garner, R.A.M.C., being lent for the time being by the Sanitary Department. When the Commission has finished its labours Captain Garner will resign and Dr. Ruffer will be re-elected.

The Cigarette Trade.

In the early days of the British occupation about 80,000,000 cigarettes were exported from Egypt every week, but now this number is more than doubled. About 65 per cent. are despatched to British possessions, 30 per cent. to Germany, and the remainder to various countries. The great number sent to Germany is due to the fact that German custom-house rules are much less stringent than are custom-house regulations in England. Therefore manufacturers here send their goods to America and elsewhere by preference through agents in Germany instead of sending the cigarettes to London.

Cairo, Nov. 14th.

Obituary.

WILLIAM SMITH, M.R.C.S. ENG., J.P.

ON Nov. 21st, at the ripe age of eighty years, Mr. Smith passed quietly away after some months' illness due to prostatic and bladder troubles. Sixty years ago Mr. Smith went to Redditch as assistant to the late Dr. Pratt, and after the death of that gentleman some five years later he succeeded to the practice. Mr. Smith obtained the Licence of the Society of Apothecaries of London in 1840, and became a Member of the Royal College of Surgeons of England in 1841. Of active and energetic habits, he soon identified himself with the progress of the place, and when the volunteer company was started he became the honorary surgeon to the corps. In all local public improvements he was a prominent factor, bringing to bear clear judgment and sound commonsense into the undertakings with which he was connected. In 1862, when Redditch was made the centre of a petty sessional division, he was the first magistrate appointed, the duties of which office he fulfilled with exemplary diligence up to within the past few months. A colour in political life being almost necessary amid so much public work, Mr. Smith always avowed himself as a Liberal, though not taking a very active part in demonstrations of this kind. Genial in manner, kind-hearted and sympathetic to his patients, Mr. Smith spent an honourable and useful life among the many who esteemed his virtues and valued his friendship. He leaves a name and a personality which will be long regarded with affection and happy memory.

WALTER EDWARD HACON, M.R.C.S. ENG., L.R.C.P. LOND.

MR. WALTER EDWARD HACON of Christchurch, New Zealand, died suddenly on Sept. 20th, at the age of forty-seven years. He was unwell on Sept. 19th, but no anxiety

was felt until the following day, when Dr. Mickle, Dr. Stewart, and Dr. Anderson were called in, but unfortunately nothing could be done to avert the fatal issue. Mr. Hacon, himself the son of a medical man, studied medicine at Guy's Hospital and became qualified in 1872 as M.R.C.S. Eng. and L.R.C.P. Lond., after which he held an appointment at Warwick Asylum. Arriving in New Zealand in 1879 he acted as surgeon to the armed constabulary on the west coast of the North Island for one year, and was then appointed resident medical officer in charge of the Sunnyside Asylum, which office he held until 1887, when he took up private practice in Christchurch. While at the asylum he distributed throughout New Zealand a large quantity of vaccine lymph obtained from calves inoculated by himself. Mr. Hacon was the founder of the Canterbury Branch of the St. John Ambulance Association and was also a member of the Christchurch Savage Club. He has left a widow and three young children, for whom much sympathy is felt.

DEATH OF AN EMINENT FOREIGN MEDICAL MAN.—The death is announced of Dr. Konstantine P. Delijiannis, Professor of Pathology in the University of Athens. He studied in Vienna, Würzburg, Berlin, and Paris, where he worked under Pasteur. After his return to his native country he was appointed Extraordinary Professor, and he established a special laboratory in Athens, and in 1882, when an epidemic of enteric fever broke out, he was able to trace its origin to the water-supply, in which he discovered typhoid bacilli. He was delegated to attend various medical congresses in Germany, Belgium, and France, and was a frequent contributor to Greek medical literature on pathological topics. Shortly before his death, too, he published a paper in French on Diseases of the Blood. Besides his medical work he took an active part in promoting general education amongst his countrymen. The cause of his lamented death is said to have been septicæmia.

DIPHTHERIA IN LONDON. — The amount of diphtheria in the county of London in the four weeks ended Nov. 5th shows an increase over that in the same period ended on Oct. 8th. In the like period ended Sept. 10th only 699 notifications came to hand, in the succeeding period the total reached 1039, or 260 as a weekly average, and in the four weeks to Nov. 5th there were recorded 1087 notifications, or 272 as a weekly average. In the October period 2 sanitary districts escaped attack, as against 1 in the November period, but while in the earlier period 5 districts had each 50 attacks or more, with an aggregate of 346, there were 7 such districts in the later period, with an aggregate of 507 attacks. But as a set off against this latter figure other 7 invaded areas had only 10 cases in all. In the earlier four weeks the registered deaths were 125 or 31 weekly, with a minimum of 29 and a maximum of 34; whereas during the later period the total was 145, or 36 weekly, 30 being the minimum and 46 the maximum. The case mortality of 12·0 per cent. in the October period was succeeded by a rate of 13·3 per cent. In the Outer Circle the aggregate of 50 registered deaths gave place to 51 in the respective periods.

THE NATIONAL DENTAL HOSPITAL AND COLLEGE.—The annual dinner of the staff and students took place at the Holborn Restaurant on Nov. 18th, Professor Francis Gotch, F.R.S., occupying the chair, and there was a large attendance of past and present students. Amongst the visitors were Mr. C. S. Tomes, F.R.S., Mr. J. Smith Turner, Mr. Raymond Johnson, Dr. Pasteur, Dr. Dudley Buxton, Dr. H. R. Spencer and Professor J. Rose Bradford, F.R.S. The chairman, in proposing the toast of "The Hospital and School," criticised the modern methods of examinations and claimed that at all events the teachers should be represented on the Examining Boards. In respect of the dental curriculum he thought that some of the general anatomy and physiology now required might well give place to some pathology and bacteriology. From his former experience as Dean of the Medical Faculty at Liverpool he was able to speak in high terms of the good qualities of the modern dental student and he thought that an effort should be made to secure a degree in dental surgery at the new University of London. Amongst other items in an excellent programme a song by Mr. Alfred Smith with violin *obbligato* by Mr. E. W. Roughton and the recitations by Mr. Frank Braine, were much appreciated.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE programme of the General Medical Council has seldom been loaded with more numerous or weighty questions than on the present occasion. We enumerated a few of these last week, but hardly any of them have been discussed as yet. The Council is deeply engaged in the consideration of penal cases. Several applications for restoration to the Register have been disposed of. Unless care is taken to save time there is a prospect of a somewhat prolonged session.

The address of the President shows that he does not allow the distance between Edinburgh and London to interfere with his attention to the duties of his high office. The account of his communications with the Lord President of the Privy Council as to the practicability of obtaining an amendment of the Medical Act such as would prevent "de registered" persons from flaunting all their titles and practising as though nothing had happened and of his communication with the Home Office on the subject of informal death certification is satisfactory. The answers of the Lord President on the former subject are significant and should be well considered by those who talk glibly about amendments of the Medical Act as though we had only to wish for them to have them accomplished.

The first letter of Sir Charles Lennox Peel, the clerk to the Privy Council, on this subject was published in the minutes of the Executive Committee on July 12th. In this he says he is desired by the Lord President to say that he cannot hold out any hope of legislation being undertaken to effect an amendment of one provision of the Act of 1858, even if the degree-giving bodies had expressed a desire for the amendment, which, added the Duke of Devonshire, "does not appear to be the case." His Grace appears to think that the degree-giving bodies are not anxious for an increase of their powers of dealing with graduates who discredit their profession and their university. But there has lately been a great development of feeling on the part of the universities on this subject and there is little doubt that Sir William Turner will be able to correct this impression. Sir William Turner is an important representative of the Scottish universities and of one in particular which was the latest to see the necessity for such additional powers of discipline as are asked for by the General Medical Council. Happily now there is reason to believe that all the universities are of the same mind in wishing for amendment, and at the Executive Committee on Monday last Sir William Turner was requested to get from them and from other qualifying bodies also an expression of their wishes on the subject. We shall be disappointed if the result of Sir William Turner's inquiries is not to evoke such a reply as to leave the Lord President in no doubt that in promoting the amendment sought for by the General Medical Council he would be complying with the views of the universities and corporations alike. It is not conceivable that the universities which now vie with the corporations in qualifying men for the medical profession would be permanently opposed to such a reasonable change in the law, one which will tend to secure in the public interest a high standard of professional conduct.

Remarkable testimony to the stringency of the examinations of the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons

of England was forthcoming during Tuesday's sitting. From certain tables supplied by the Medical Department of the Royal Navy (which still require verification), by the Director-General of the Army Medical Service, and by the Under Secretary of State for India, it appeared that, whereas there had been a very high percentage of rejections among candidates for commissions in the services holding the degrees of the Universities of Edinburgh, Aberdeen, Glasgow and Dublin, the diplomas of the Irish and Scottish Conjoint Boards, and the Licence of the Society of Apothecaries of London, out of 39 candidates holding the diploma of the English Conjoint Board 32 had obtained commissions by competitive examination. The success of the English students impelled Dr. McVail to propose that the Examination Committee of the Council should be asked to report upon the tables—a motion which, in our opinion, was rightly rejected, for it reflected unjustly upon the examiners for the commissions in the services and at the same time sought an explanation where no explanation is needed. The examinations of the English Conjoint Board are very thorough and the men who hold their diplomas are—everyone knows it—as highly educated as the graduates of many universities and in some directions more practically equipped. Dr. McVail by his motion called marked attention to the unfair position in which, as yet, the London student is placed in being unable to obtain an M.D. degree at the conclusion of studies severe enough to procure him the distinction elsewhere.

Most of the short sitting of Tuesday afternoon was occupied in discussing Mr. Horsley's resolutions asking for the production of all documents in relation to certain cases in which unregistered persons had been prosecuted by the Council, and a similar resolution of Mr. Brown in regard to the case of the late Mr. H. Kingsley Hunter. The Council by large majorities and with little dissent passed resolutions showing that it has no real objection to the inspection of such documents under conditions securing their preservation in such order as may make them available for easy reference. The members of the Council will thus have the opportunity of seeing documents which cannot but be instructive. It is to be hoped that they will share with Mr. Horsley the study of them. There are too many proofs that either the system of conducting prosecutions at present adopted is faulty or that the law is inefficient. If this latter supposition be the correct one the occasion is good and the time is ripe for asking the Government for amendments despite the views of the Privy Council. Within the last few weeks a prosecution against an unregistered person has ignominiously failed in Scotland before the High Court of Justiciary, more, as we read the deliverances of the judges, from faulty presentation of the case than from any merits in the defendant. If the inspection of documents will throw light on such failures it will confer a very great service on the public and the medical profession.

On Wednesday the Council sat much of the day *in camerâ*, while on Thursday they commenced the investigation of the penal cases.

In connexion with the meeting of the General Medical Council we are glad to be able to state—and the members of the Council as well as other members of our profession will be pleased to hear—that the health of Mr. W. J. C. Miller B.A., who was for so many years registrar of that body, is very satisfactory. Writing to a friend he states that what he now suffers chiefly from is a great difficulty with his handwriting and slight weakness in walking. It will be remembered that Mr. Miller was obliged to resign the duties which he had so long and so faithfully and ably discharged owing to a sudden breakdown in his health. He would like his old friends to know that he now lives with his sister in a very pleasant house; he is often heard to say that the lines have fallen unto him in pleasant places.

TUESDAY, NOV. 22ND.

The session of the General Council of Medical Education and Registration was opened to-day in the offices of the Council, Oxford-street, London. Sir WILLIAM TURNER, President of the Council, occupied the chair and there was a full attendance of members.

The President's Address.

The PRESIDENT, in accordance with custom, opened the proceedings with an address. He said:—

"It is not my intention to trespass on your time and attention by the delivery of a lengthy address. It may, however, be useful to refer to some of the subjects to which the Council will require to give consideration during the present session. In the first place I may call to your recollection that during the session held in May I, as your President, was asked to put myself into communication with some of the Government departments regarding questions in which the Council and the medical profession are greatly interested. The disciplinary powers exercised by the Council and the licensing bodies have frequently been under the consideration of the Council and the Executive Committee, and at the May meeting of Council I was requested to communicate with the Lord President of the Privy Council as to the practicability of obtaining such an amendment of the law as would effectually prevent the holder of a medical diploma or degree from using the title thereof after his name had been erased from the Medical Register under Section 29 of the Medical Act, 1858, and for so long as the erasure continued in force. The Council will find in the minutes of the Executive Committee, July 12th, 1898, a print of the letter which I wrote to the President and of his reply. Subsequent to this correspondence I was requested by the Executive Committee to ask an interview with the Clerk of the Privy Council with reference to this matter. As I thought that it would facilitate the consideration of the subject if I could place in the hands of the Privy Council some definite proposal as to the direction which legislation should take I requested Mr. Muir Mackenzie to draft clauses which might be embodied in a Bill. This was accordingly done and at an interview with Mr. Almeric Fitzroy, who has succeeded Sir Charles Lennox Peel in the office of Clerk to the Privy Council, I explained the purport of these clauses and left a copy with him. The subject will, I was assured, receive due consideration. I was given to understand that as a preliminary step it will be necessary to ascertain if the universities would offer no opposition to the Medical Act, 1858, being amended, so that if a graduate in medicine had his name erased from the Medical Register, under Section 29 of this Act, his right to use the title or titles obtained from his university should be suspended so long as the erasure remained in force. At the meeting of the Executive Committee yesterday I was requested to continue in communication with the Privy Council and also to ascertain the opinion of the medical licensing authorities on the question of suspension of the right to use a title or titles so long as the erasure of a name and title remains in force. The subject of death certification and the amendment of the law regarding it has frequently been before the Council, and a strong opinion has been expressed that the law required alteration, so that the irregularities, which now only too frequently occur, should be in the future no longer possible. At the request of the Executive Committee I put myself into communication with the Home Department on this subject, and requested Dr. Church to accompany me to an interview with the Permanent Under-Secretary. The whole question was discussed at our meeting at considerable length, and the evils which exist were fully recognised by the Under-Secretary. We were assured that the matter had been for some time under consideration, with a view to an amendment of the law, and that a communication would be made by the Home Office to the Local Government Board on the subject. In the month of May the Council appointed a committee,

consisting of Mr. Tomes, Mr. Horsley, and myself, to take steps to induce the Government to insert a clause in the Companies' Act Amendment Bill with the object of preventing the registration of companies to carry on medical, surgical, and dental practices. A meeting of the committee, at which Mr. Muir Mackenzie was present, was held early in October, when a discussion took place as to the best means to carry out the instruction of the Council. It was arranged that clauses should be drafted by Mr. Muir Mackenzie and placed in the hands of the Lord Chancellor. This has accordingly been done. It is due to Mr. Tomes to state that he has taken an active and important part in bringing the whole of this question before the notice of the Lord Chancellor. In connexion with the resolution of the Council, which remitted to the Executive Committee to take steps to secure that the Medical Council shall receive due recognition and representation in national functions and ceremonies, a sub-committee, consisting of Sir Dyce Duckworth, Mr. Carter, and myself, was appointed to obtain the necessary information. So far as our inquiries have gone we have not received much encouragement and we have been told that, as regards recognition and representation in national functions and ceremonies, no corporate body has any vested right of participation. In any public ceremony the director of the function considers applications to participate, and grants them as far as he is able, or he may issue invitations at his own discretion, but there are no rights or privileges in relation to the matter. At our meeting in May a committee, consisting of Sir Richard Thorne, Dr. Glover, Dr. MacAlister, and Sir Christopher Nixon, was appointed to confer with delegates from the committee which had framed the Midwives' Bill and to report to the Council. The conference was held on June 25th, 1898, and the report of the proceedings has been circulated amongst the members of the Council. I thought it advisable to authorise its circulation so that members should have ample time to read and consider what took place at the conference before the Council enters on the consideration of the report which our committee is to present on the subject. The Council will, I am sure, hear with much satisfaction that of the first impression of 20,000 copies of the British Pharmacopœia issued in the spring of the year all the copies have been sold. After consultation with Dr. Leech, chairman of the Pharmacopœia Committee, in the month of October 1500 additional copies were ordered to be printed to meet immediate necessities, and of these 500 have been sold. Dr. Leech and his committee will, I have no doubt, during the present session advise us as to the future. The Executive Committee will submit for your consideration a revision of the memorandum on reciprocity of medical practice in relation to foreign countries so far as it affects the question of the conditions under which foreign medical practitioners are allowed to practise medicine in the United Kingdom. The treasurers will present a report on the proposed alterations on our building and another on a proposed sinking fund to meet the charge for the alterations which have been made on our property. You will also have to take into consideration, on a report from the Examination Committee, the inspector's report on the examinations of the Apothecaries' Hall of Dublin held during the spring and summer. In this connexion I have to state that, owing to Dr. Sidney Coupland having accepted the appointment of a Commissioner in Lunacy, he has found it necessary to resign his position as our inspector. Whilst congratulating Dr. Coupland on his appointment to the responsible office for which he has been selected the Council will, I am sure, join with me in expressing regret that we are no longer to have the benefit of his valuable services. In conclusion, I have to state that, under the instructions of the Penal Cases Committee, several charges made against registered practitioners will have to be investigated. The Council will, I feel sure, give to these cases the thoughtful care and attention which are essential when questions affecting the character and conduct of members of our profession are being inquired into."

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the Council thanked the President for his address and requested him to allow it to be printed in the minutes.

Examinations for the Services.

The first business on the programme was to receive three tables, one showing the results of the competition held on Oct. 31st for commissions in the Medical Department of the Royal Navy; the second showing the results of a competition held in August for commissions in the Royal Army Medical Corps; and the third showing the results of a competition held in August for commissions in the Indian Medical Service.

Mr. ALLEN (Registrar) said he must ask that the first table, that referring to the Navy, be withdrawn because some of the figures in it would require to be verified.

On the motion of Dr. P. HERON WATSON, seconded by Sir RICHARD THORNE, the Council received the second and third tables and thanked for them respectively the Director-General and the Under Secretary of State for India.

Dr. MCVAIL said he wished to call attention to a somewhat extraordinary state of things disclosed by the tables. Taking the three tables he found that there were 39 candidates from the English Conjoint Board and all got commissions excepting 7. From the Irish Conjoint Board there were 7 candidates and 4 got commissions; from the Scottish Conjoint Board 5 candidates and only 2 got commissions; from the University of Edinburgh, 13 candidates and 6 commissions; from the University of Glasgow, 4 candidates and 3 commissions; from the University of Aberdeen, 3 candidates and 3 commissions; from the University of Dublin, 5 candidates and 2 commissions; and from the Apothecaries' Society of London, 4 candidates and 2 commissions. Though the others were fairly comparable there was an extraordinary difference between them all and the Conjoint Board in England. The matter was a serious one and he moved that the tables be remitted to the Examination Committee for report.

Mr. BROWN, seconding the motion, said that this apparently wholesale rejection of candidates should be inquired into.

Sir DYCE DUCKWORTH said that Dr. McVail should indicate in his motion what it was that he desired the Examination Committee to inquire into. For eight years he had been an examiner in medicine for the navy and therefore he could speak with some authority so far as the navy examinations were concerned, though he might explain that he was no longer an examiner. In examining a candidate for the navy the examiners knew nothing about the man; he was a mere number to them. They did not know what school he had studied at and the marks were given simply according to the merit displayed in the examination. There was no bias whatever, and indeed he could not conceive a better or more impartial examination. He had no doubt that the same held good with regard to the other services.

Mr. TEALE submitted that the question of the fairness of these examinations lay entirely outside the functions of that Council.

Mr. CARTER said that information as to the particular grinder with whom the candidate had worked would be more useful and to the point than information as to the school from which he had got his diploma.

On a show of hands being invited 11 were held up in favour of the motion and an equal number against it.

The PRESIDENT said it was evident that a considerable number of the members had not taken part in the vote. He had taken occasion before to point out the difficulty of the position when a considerable number of the members present refrained from voting and he would point it out again.

Dr. MCVAIL claimed that the names and numbers be recorded.

Sir RICHARD THORNE asked as a point of order whether members who had refrained from holding up their hands were entitled to vote now when the names and numbers were recorded.

The PRESIDENT said he had noticed on former occasions that members who had not held up their hands responded when the names were taken and there was no Standing Order against such proceeding. It was a question, however, which might very well be considered.

Dr. MACALISTER submitted that the show of hands was not the formal vote.

After some further discussion had taken place the members of the Council expressed a desire to have a ruling from the chair on the point, whereupon the PRESIDENT ruled that when the names were called it was open to members who had not raised their hands to respond and thus record their votes.

The roll being called 13 members voted against the motion, 11 for it, and 5 declined to vote. The motion was accordingly lost.

The Employment of Unqualified Assistants.

A number of communications on this subject were (in accordance with the recommendation of the Executive Committee) referred for consideration and report during the present session to a committee consisting of Dr. Church, Dr. MacAlister, Dr. Bruce, Mr. Bryant, Mr. Brown, and Mr. Teale, the last-mentioned to be chairman.

The Inspection of Documents.

Mr. HORSLEY asked the leave of the Council to consider next in order all notices of motion on the programme relating to the inspection of documents.

Dr. MACALISTER submitted that the notices standing in the name of Mr. Horsley did not comply with the new Standing Order with reference to the inspection of documents in as much as the notices did not specify the purpose for which the inspection was to be made.

Mr. HORSLEY said Dr. MacAlister surely did not suggest that he should put down on the public programme the purpose for which he desired to see the documents.

Dr. GLOVER suggested that Mr. Horsley might give the Council his reasons *in camerâ*.

Mr. HORSLEY said he would have no objection to that course, but as to the notices being in order he had taken legal advice on the subject and he submitted that they were strictly in order.

After some further discussion leave was given to Mr. Horsley as desired.

The first notice of motion stood in the name of Mr. Brown and was to this effect:—

That all minutes, papers, and documents relating to the recent prosecution of the late Mr. H. Kingsley Hunter, Licentiate of the Society of Apothecaries of London, be presented to the Council—

and Mr. BROWN moved accordingly.

Dr. MACALISTER said that there was an appeal pending in this case and that in consequence many of the documents could not be produced, certainly could not be printed, as the motion suggested.

Mr. HORSLEY admitted that there might be a difficulty about printing, but there was no difficulty in the way of a confidential inspection by the members of the Council.

Sir RICHARD THORNE urged Mr. Brown to withdraw his motion on the ground that many of the documents were in other hands.

Mr. BROWN said that wherever the documents might be at the present moment the whole case would have to be gone into very thoroughly because the profession took the very deepest interest in it. He appealed to the Council to give to him and others interested in the matter an opportunity of informing themselves as to all the facts of the case. If the documents could not be printed, then he asked an opportunity for their confidential inspection.

Mr. HORSLEY, seconding Mr. Brown's motion, said with regard to the documents not in the possession of the Council that they were in the hands of the servants of the Council and could be brought here without the slightest inconvenience. He was not aware that the appeal case was even in the list. At the present moment certain of the members of the Council knew all the facts and he saw no reason why they should be in this exceptional position. With all respect he claimed for himself the same privileges as the committee in this matter.

Dr. ATTHILL thought that in view of the appeal case it would not be wise to produce the documents.

Dr. GLOVER said that in his opinion Mr. Horsley was perfectly within his rights in making the claim he did and he supported the motion. Every member of the Council was entitled, he held, to see the material upon which the Penal Committee had acted in the case.

Sir JOHN BATTY TUKE said he felt quite clear on the point that any member of the Council was entitled to see the documents.

Mr. TOMES contended that as the Council and not the Committee was the party to the action no obstacle should be thrown in the way of any member of the Council seeing the documents.

The Council then agreed to the motion in the form that all minutes, papers, and documents, &c., "be produced to the Council," the motion being agreed to by a very large majority.

Mr. HORSLEY moved:—

That all documents in relation to the case of an unregistered person named Hamilton be produced for inspection by members of the Council.

He said that this person had been prosecuted unsuccessfully by the Council and he intended to move a resolution with reference to the case.

Sir CHRISTOPHER NIXON seconded.

The proposal was agreed to.

Mr. HORSLEY next moved:—

That all documents in relation to the case of an unregistered person named Steel be produced for inspection by members of the Council.

Steel, he said, had been successfully prosecuted by the Council, but he wished to raise the question of his conduct since his conviction. He could not do so without seeing the documents in the case.

Mr. BROWN seconded and the motion was also agreed to.

Mr. HORSLEY further moved:—

That all documents in relation to the case of an unregistered person named Allinson be produced for inspection by members of the Council.

He stated that this case was parallel with that of Steel.

Sir CHRISTOPHER NIXON, in seconding, said he would be prepared to second a motion in similar terms from whatever member of Council it came. He had the strongest possible feeling that all the documents belonging to the Council should be open to the individual members of the Council. There should be a Standing Order to the effect.

The motion was agreed to.

The PRESIDENT pointed out that after the adoption of the four resolutions just passed it was essential to arrange that the documents in question should be inspected under conditions such as to ensure the preservation of their privacy. There must be a room in which they could be exhibited, someone must be responsible for them, and hours at which they could be seen must be fixed.

Some conversation ensued, and this resulted in the determination that documents which members wanted to inspect might be seen in the store-room under the Council Chamber, that they might be seen at such times as suited the convenience of those members who wished to inspect them, and that if inspected before or after office hours the superintending clerk should be paid for overtime.

The Council adjourned.

WEDNESDAY, NOV. 23RD.

The Council met again to-day, Sir WILLIAM TURNER being in the chair.

The Case of Charles Alexander Ducket.

The Council proceeded with the consideration of the case of Charles Alexander Ducket, of 74, Brooksby's-walk, Homerton, registered as Mem. R. Coll. Surg. Eng. 1888, Lic. R. Coll. Phys. Lond. 1888, Lic. Soc. Apoth. Lond. 1888, of 12, St. George's-terrace, Great Yarmouth, who had been summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That he, being a registered medical practitioner, caused and permitted an unqualified person named David Moses Roberts to attend and administer medical treatment to patients who required his (Ducket's) services, as if he had been a duly qualified practitioner, and in particular that he (Ducket) caused and permitted the said unqualified person to attend and administer medical treatment to a woman named Louisa White and to an infant named Hilda Helen Bailey in the circumstances stated in the evidence and in the verdicts of the coroner's juries taken and given at inquests held on the deaths of the said deceased. The complaint against him (Ducket) was that in the said matters he had been guilty of infamous conduct in a professional respect. The information and evidence consists of the depositions taken and verdicts given at the said inquests, which have been transmitted by the coroner to the General Medical Council.

Mr. DUCKET attended without legal assistance.

After Mr. MUIR MACKENZIE had read the depositions taken and the verdicts of the juries, Mr. Ducket was asked by the President whether he had anything to say to the Council by way of explanation.

Mr. DUCKET said he had to confess that in the two cases mentioned he had been negligent, and he could only plead that he was a little pressed with work on account of the absence of the principal, Mr. Evans. He denied, however, that he had any design to cover the unqualified assistant. It was Mr. Evans who employed him (Mr. Ducket), and while he was with him he was a very good master and he should not like to suggest that it was in any way at Mr. Evans's instigation that Mr. Roberts attended these cases.

The PRESIDENT asked whether he understood Mr. Ducket to admit neglect of the patient in these two cases.

Mr. DUCKET said he admitted that there must have been neglect.

Sir RICHARD THORNE pointed out that there was nothing in the charge as formulated about negligence and asked whether it was competent and go beyond the charge.

Mr. MUIR MACKENZIE said that as long as his experience went back the practice had been ever to consider the neglect of patients, and neglect of patients certainly came within Section 29 of the Medical Act. The charge that was directed by the Penal Cases Committee to be formulated was that of causing and permitting an unqualified person to attend.

Mr. DUCKET, in reply to questions addressed to him by various members of the Council, said that he was assistant to Mr. Evans, and although he acted as substitute for him when he went away this made no difference in his position or salary. In Mr. Evans's absence Mr. Roberts was under his control in a general way and after the first case happened he warned him that he should call in a qualified man. He had no interest in the practice beyond his salary, and after these inquests he was discharged by Mr. Evans. He had no power to dismiss Mr. Roberts nor did he consider himself in any way responsible for what Mr. Roberts did. When he (Mr. Ducket) was engaged Mr. Evans told him that he already had an assistant, but in view of the action of the General Medical Council he required a qualified man and he would keep on the unqualified assistant as a dispenser and collector of rents. It was with this clear understanding that he engaged himself as assistant to Mr. Evans. Though he was on the best of terms with Mr. Evans while in his employment he had not seen him since he left it, nor had Mr. Evans volunteered to come forward and speak for him before this Council. He was quite aware that what he had done had damaged Mr. Evans's practice as it had certainly damaged his (Mr. Ducket's) reputation and he was extremely sorry for what had occurred.

After deliberating *in camerâ* for a time the Council decided that the charge had not been proved to their satisfaction.

Restoration to the Medical Register.

The Council decided to deal with a report in which the Executive Committee stated that they had considered petitions for the restoration of certain names to the Medical Register by medical practitioners whose names had been removed therefrom under Section 29 of the Medical Act, 1858.

The PRESIDENT said that as the report referred to persons who were not present it ought to be taken in private.

Members of the public who were in the hall thereupon withdrew. On their readmission, one hour and a quarter afterwards,

The PRESIDENT said: The Council have considered the report of the Executive Committee on the petitions for the restoration of names to the Medical Register by medical practitioners whose names have been removed therefrom under Section 29 of the Medical Act. As regards William John Patterson the Council decline to restore his name to the Register at present. As regards Robert Ingram Robertson the Council resolve to call the attention of Mr. Robertson to his statement that though unregistered his occupation has been that of a medical practitioner and they refuse his application. As regards Robert Alexander Douglas Lithgow, the Council resolve that his application be refused. As regards Herbert Tibbits the Council resolve that his application be refused. As regards Alfred Freeman the Council resolve that his application be adjourned and that the documents now before the Council be forwarded to the Royal College of Physicians of Edinburgh for its consideration.

Inspection of Documents.

Mr. HORSLEY obtained the leave of the Council to proceed with the two notices of motion which he had placed upon the business programme for the day. The first of the two was—

That all documents in relation to the case of Dr. Farrar be produced for inspection by members of the Council.

He explained that this related to a case of "covering" of great importance, for it contained a point that had not arisen in any previous case. His intention was to draw attention later in the session to the procedure of the Council in considering cases of "covering."

Asked if the case had been before the Council and if it had been adjudicated upon—

Mr. HORSLEY replied that no judgment had been given upon it as it had been withdrawn by the complainants, the Medical Defence Union. The record in the case appeared in the Council's minutes of 1895, pages 61 and 62.

Sir DYCE DUCKWORTH: This name is not on the Register.

Dr. MACALISTER: He is dead.

The PRESIDENT: If the man is dead what can you do with him?

Mr. HORSLEY: I have nothing to do with the case of "covering." It is known that the man is dead and that the unqualified assistant took a public-house shortly after the Council gave their decision. What I want the document for has relation to the extremely important point as to the way in which evidence is laid before us, because I have a distinct resolution relating to that point which I will give notice of at the proper time.

The PRESIDENT: This is a case which death has determined. What object is there in the question of how the evidence has been tendered in the case of a person who is gone past recovery?

Mr. HORSLEY: I have nothing to do with the case itself. I was simply asking for the documents, for I know as a matter of fact that certain evidence was brought before this Council in a certain way and it ought to form a test case in regard to our procedure in cases of "covering." The request for documents has nothing to do with the merits of the case.

Dr. MACALISTER suggested that as all the documents were printed at the time for private circulation it would be easy to provide a copy for inspection.

Sir RICHARD THORNE said he hoped they would pass the motion. When a member asked for documents he ought to get them without opposition. If the Standing Order on the subject passed last session came forward again he would not vote in the way he did then.

The motion was agreed to.

Mr. HORSLEY next moved:

That the lawyer's bill of costs for 1897 be produced for inspection by members of the Council.

Dr. MACALISTER suggested that this had no reference to penal cases.

Mr. HORSLEY said that it related entirely to the penal cases which he wished to cite to the Council. The bill of costs in question related to their legal procedure, especially in regard to "covering" cases. It fell under the notice which he had given to "draw attention to the procedure of the Penal Cases Committee in relation to certain complaints of 'covering' made to the Council."

Mr. BROWN seconded.

Dr. MACALISTER: There are two classes of documents, one relating to penal cases and the other not to penal cases, and this document does not seem to refer to penal cases.

Mr. HORSLEY rose to a point of order. He said that when Dr. MacAlister talked on this subject as he was doing he was calling in question his (Mr. Horsley's) honour. He had informed the Council that he required this document for penal cases in relation to the case which had just been referred to.

Dr. MACALISTER said that that was exactly what it was necessary to bring out.

Mr. HORSLEY retorted that that was exactly what he had brought out already and that it was so was the reason why he had risen to a point of order.

Sir JOHN BATTY TUKE considered that discussion of this kind was to be altogether deprecated because it was calculated to give the public outside an impression that there was something to hide, and there was not.

Sir DYCE DUCKWORTH said that he could not see that any objection could arise to a member of Council seeing bills of costs. His view, as one of the treasurers of the Council, was that it was quite open to any member of the Council to see any particular bills of costs which he might wish to see.

The motion was then agreed to.

Mr. HORSLEY thereupon moved:—

That all the documents relating to the penal cases referred by the Penal Cases Committee to the present session of the Council be produced for inspection by members of the Council.

He remarked that after what had fallen from Dr. MacAlister in connexion with the previous motion he declined to give any reason for making the present proposal.

Dr. MACALISTER said that what was now wanted were distinctly documents relating to penal cases.

Mr. BROWN seconded the motion, which was agreed to without further comment.

Midwives' Registration.

On the motion of Dr. MACALISTER, seconded by Dr. BRUCE, a report from the Midwives Bill Conference Committee was received and entered on the minutes.

Tropical Diseases.

Dr. MACALISTER moved the insertion into the minutes of a communication on this subject. The programme showed that the letter in question had reference to the measures adopted by the Government, after requesting the opinions of the General Medical Council and the British medical schools. Its terms were as follows:—

Downing-street,
November 9th, 1898.

SIR,—1. In the fifth paragraph of the letter from this Department of the 11th of March last it was stated that Mr. Secretary Chamberlain, with a view to supplementing the instruction afforded by the medical schools, was endeavouring to make arrangements for giving to colonial medical officers special clinical instruction in tropical medicine such as is given at Netley and Haslar in the case of medical officers of the Army, Navy, and Indian Medical Services, and which, from lack of the necessary material, cannot invariably be given at the medical schools.

2. These arrangements have now been made. The Directors of the Seamen's Hospital at the Albert Docks, which offers exceptional opportunities for studying cases of tropical disease, are providing the necessary buildings and teachers for the accommodation and instruction of the medical officers who may hereafter be selected by the Foreign Office and the Colonial Office for appointments in the tropics. A substantial contribution towards the initial cost of the buildings is being made by the Government, and it is hoped that by the 1st of October, 1899, it will be possible to receive medical officers at the hospital for purposes of instruction.

3. It is proposed that, as is at present the case, candidates for medical appointments in the British colonial possessions shall be fully qualified before they can be put upon the Secretary of State's list, that from this list a certain number shall be selected annually to fill the vacancies which may occur in the Colonial Medical Service, that the selected candidates shall be trained for a period of at least two months at the Seamen's Hospital, and that they shall then be sent to the colonies or protectorates to which they have been allotted, where, when practicable, they will be attached in the first instance to the head quarters hospital for the purpose of gaining additional experience. In estimating the respective merits of candidates on the Secretary of State's list regard will be had to the fact whether or not they have already received instruction in tropical medicine.

4. Judging from the replies which have been received from the General Medical Council and the medical schools, Mr. Chamberlain believes that the above arrangements will prove acceptable.

5. Although the school at the Seamen's Hospital is designed for the training of medical officers for the Government service, doubtless there will be many other medical men, such as the medical officers of missionary societies and trading corporations and private practitioners, who propose to settle in tropical countries, who will be glad to avail themselves of the advantages which such a school can offer.

6. The colonies are being asked to make pecuniary contributions, to collect pathological material for use in the school, and to support the scheme in every possible way. So far, then, as this Department is concerned, no effort is being spared to make the school a success, and Mr. Chamberlain feels confident that the medical schools of this country will also do what is in their power to assist the development of an institution which is likely to be of general service and to benefit medical science not only by giving a stimulus to the investigation of tropical disease, but also by qualifying a body of men to become investigators.

7. Mr. Chamberlain is so impressed with the importance of this subject as affecting the administration and well-being of the tropical colonies that in addition to this scheme for providing a thoroughly efficient colonial medical staff, he wishes to encourage by every means in his power scientific inquiry into the causes of tropical diseases. Accordingly, he has already, after correspondence with the Royal Society, instituted a commission to study the subject of tropical malaria on the following lines.

8. The Royal Society has nominated two competent observers who have already proceeded to Italy for a short preliminary study and will afterwards go to some place in Africa, probably in the first instance to Blantyre, in the British Central Africa Protectorate, where it has been ascertained that there exist good opportunities for carrying out the purpose in view.

9. In addition the Secretary of State has nominated an experienced medical officer of the colonial service to aid in the investigation. This officer will, in the first place, proceed to India in order to study under Surgeon-Major Ronald Ross for about two months so as to make himself acquainted with the result of that gentleman's researches. He will then join the other two observers in Africa, where they will together pursue their studies, which will probably occupy about two years, and report from time to time to a committee in England nominated jointly by the Royal Society and the Secretary of State.

10. Mr. Chamberlain has been glad to learn from the replies which have been sent to the letter referred to above that arrangements already exist, or are about to be made, for giving special instruction in tropical medicine in upwards of twelve British medical schools, and he trusts that these schools, some of which (such as that of University College, Liverpool; University College, Bristol; and the University of Durham College of Medicine at Newcastle-on-Tyne), being situated in large seaports, possess exceptional facilities for the study of tropical disease, will keep in correspondence with the School of Tropical Medicine at the Seamen's Hospital with a view to mutual assistance and advice.

11. In conclusion, Mr. Chamberlain desires to express his thanks to the General Medical Council and the British medical schools for the warm interest which they have taken in this matter, and for the ready and cordial support which they have afforded him. He will welcome any suggestions which may be made in furtherance of the object in view.

I am, Sir, your obedient servant,
EDWARD WINGFIELD.

The President of the General Medical Council.

Sir DYCE DUCKWORTH, in seconding Dr. MacAlister's motion, pointed out that the Colonial Office letter did not commit the Council to anything.

Sir JOHN BATTY TUKE said that it contained an indication that Mr. Chamberlain would welcome any suggestions which might be made by the Council.

Dr. MACALISTER reminded members that anyone could propose a motion on the subject.

The letter was then ordered to be entered on the minutes.

The Council adjourned.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations have been admitted Members of the College:—

Acland, Hugh Thomas Dyke.
Adam, John Law.
Alexander, Kenneth Bush.
Ambrose, William Cole.
Balderston, Robert.
Bates, Thomas Wright.
Berry, Thomas Percival.
Berryman, Edmund Newton.
Blackburn, Vernon Kent.
Bonnet, Saint René.
Brown, James Warburton.
Burd, Cyril Pritchard.
Cannan, David.
Carsberg, Alfred Ernest.
Chadborn, Charles Nugent.
Churton, John Gaitskell.
Clayton, Ernest Tomlinson.
Clogg, Herbert Sherwell.
Cogswell, Philip Dare.
Coltart, Guy Hemming.
Coltart, Henry Neville.
Colyer, Stanley William Randolph.
Cooper, Frank.
Crispin, Edward Smyth.
Dalgado, Patrick.
Darby, William Sydney.
Davies, David.
Eason, Herbert Lightfoot.
Eddison, Francis Ryalls.
Eichholz, Oreste.
Ereant, Harold John.
Evans, John Rees.
Foss, Edwin Vincent.
Fox, Herewald Evelyn Croker.
Frankling, Herbert George.
Fuller, Laurence Otway.
Galloway, William Hearfield.
Gardiner, Alexander Stoker.
Glasier, Howard.
Glynn, Ernest Edward.
Harris, John.
Hart-Smith, Humphrey Morshead.
Heath, Francis Harold Rodier.
Henderson, John Hunter.
Hoban, Thomas.
Holländer, Bernard.
Hutchinson, Frederick Ernest.
Irvine, Guy Harle.
Jeffreys, Herbert Castelman.
Johnston, Joseph.
Jones, William James.
Jordan, Alfred Charles.
Keeling, George Sydney.
Lawson, Frank Howard.
Leaning, Robert Craske.
Letchworth, Thomas Wilfred.
MacCallan, Arthur Ferguson.
McGavin, Lawrie Hugh.
McKay, Robert.
McMullen, William Halliburton.
Marrack, George Comyns.
Martin, Francis John Hensley.
Martin-Leake, Arthur.
Maynard, George Darell.
Mayo, Thomas Alfred.
Milner, Norton.
Morris, Frank Mayo.
Morris, John Ignatius Vernon.
Murray, Richard Galway.
Nourse, Arthur William.
O'Neill, Thomas.
Osborde, Harry.
Owsley, George Chetwode.
Page, Algenon Fountain.
Parsons, Arthur Ruscombe Crane.
Payne, Robert Whitworth.
Peake, Arthur Edward.
Pennington, S. B. A. Cullen Carter.
Pierce, George Oliver.
Pollard, Sidney Pochin.
Powell, Cecil.
Powell, John Edward.
Pugh, Charles Grant.
Renshaw, Graham.
Rice, David.
Richardson, Walter Silverwood.
Rowland, Lewis Thomas Archibald.
Rowland, Penry William.
Ryder, Claude Clifford.
Sandison, James.
Saward, Arthur Henry Michael.
Scaping, Harold Massey.
Scholefield, Ernest Hall.
Sills, Clarence Ham.
Simpson, Adam Pearson Hope.
Simson, Colin Coape.
Simson, Harold.
Smith, Sidney Robert.
Smyth, Alexander.
Somerville, John.
Sprawson, Cuthbert Allan.
Spurgin, Percy Bertram.
Sumner, Fred William.
Symes, Ernest.
Tarbet, Peter Rowley.
Telling, Walter Henry Maxwell.
Thomas, Charles James.
Thorp, Harold.
Trotter, Edward.
Tucker, William Hancock.
Turner, James William.
Turton, Edward.
Underhill, Sydney V. Hercules.
Unwin, William Howard.
Urwin, John Johnson.
Vernon, Alexander Apfell.
Verley, Reginald Charles.
Walker, Arthur Nimmo.
Wilcox, Richard Loy.
Woodforde, Robert Edmond Heighes.

The following gentlemen passed the First Professional Examination for the diploma of Fellow:—

Monday, Nov. 14th:

Robert Ainslie Ross, Maurice Vincent Dee, M.R.C.S. Eng., L.R.C.P. Lond., M.B., C.M. Edin., Edinburgh University and King's College, London; Herbert Stanley French, B.A. Oxon., Oxford University; Henry T. Hadley Williams, M.R.C.S. Eng., L.R.C.P. Lond., M.D. Western University, Ontario, and Edinburgh University; Henry Rollinson Whitaker, St. Bartholomew's Hospital; William Wright, M.B., Ch.B. Vict., Owens College and Royal Infirmary, Manchester Stanley Copley, M.R.C.S.

Eng., L.R.C.P. Lond., Guy's Hospital; Thomas Copeland Savage, University College, London; and Alec. Leslie Matthews, London Hospital.

Seven gentlemen were referred to their professional studies for six months.

Tuesday, Nov. 15th:

William Henry Clayton Green, B.A. Cantab., Cambridge University; Hugh Davies-Colley, B.A. Cantab., Cambridge University and Guy's Hospital; Evan Laming Evans, M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University, St. Bartholomew's Hospital, and King's College, London; Arthur Maurice Collcutt, M.B. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital; Bertrand Seymour Jones, St. Thomas's Hospital; Henry Bennett Bailey, M.R.C.S. Eng., L.S.A. Lond., M.D. Brux., Guy's Hospital; Alwyne Compton Norman Maclaren, B.A. Cantab., St. Bartholomew's Hospital; Bernard Elwell Potter, M.R.C.S. Eng., L.R.C.P. Lond., Charing-cross Hospital; Arthur Hubert Brodribb, M.R.C.S. Eng., L.R.C.P. Lond., St. Mary's Hospital.

Six gentlemen were referred to their professional studies for six months.

Wednesday, Nov. 16th:

Shapurji Hormasji Modi, M.R.C.S. Eng., L.R.C.P. Lond., L.M. & S. Bombay, Grant Medical College, Bombay, St. Bartholomew's Hospital, and King's College, London; George I. Thompson Stewart, M.B., C.M. Aberd., Aberdeen University and St. Thomas's Hospital; John Atkins and Thomas Frederick Robinson, Guy's Hospital.

Twelve gentlemen were referred to their professional studies for six months.

Thursday, Nov. 17th:

John William Thomas Walker, M.R.C.S. Eng., L.R.C.P. Lond., M.B., C.M. Edin., Edinburgh University and Middlesex Hospital; Frank Everitt Murray, Cambridge University and St. Bartholomew's Hospital; Arthur Edmunds, King's College, London; Francis Dawson Blandy, Middlesex Hospital; Charles Ernest West, Oxford University and St. Bartholomew's Hospital; Lawrence Jones and William Francis H. Coke, St. George's Hospital; Michael Foster Reaney and Frank Challans, London Hospital.

Seven gentlemen were referred to their professional studies for six months.

Friday, Nov. 18th:

Edmund Henderson Hunt, B.A. Oxon., Oxford University and St. Bartholomew's Hospital; Thomas Waddelow Smith, M.R.C.S. Eng., L.R.C.P. Lond., King's College, London; and Harold Walker, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital.

Five gentlemen were referred to their professional studies for six months.

UNIVERSITY OF LONDON.—At the B.Sc. Examination the following candidates were successful:—

First Division.—Charles Edmund Ashby (i., iii., iv.*), Owens College, Pharmaceutical Society and University Tutorial College; Frank B. Barrett (iii., iv., viii.), Mason University College; Albert William Bartlett (v., vi., viii.), Royal College of Science and private study; Alfred George Cracknell (i., ii., iii.), University Tutorial College; Henry Thomas Davidge (i., ii., iii.), Royal College of Science and private study; William Henry Eccles (i., ii., iii.), Royal College of Science; James Lewis Forbes (iii., iv., v.), University Tutorial College; William George Freeman (v., vii., viii.), Royal College of Science; William Henry Harwood-Yarred (iv., vi., vii.), St. Thomas's Hospital; R. W. H. T. Hudson (i., ii., iii.), St. John's College, Cambridge; W. Allan Picknett (ii., iii., viii.), Royal College of Science and Private study; Richard Thomas Robinson (i., ii., iii.), private study; Frank Shedden (iii., iv., viii.), Mason University College; and H. H. Swinnerton (v., vi., viii.), private study and Royal College of Science.

Second Division.—Sophia G. L. Adams (i., ii., v.), Royal Holloway College; Richard Appleton, B.A. (iv., viii., ix.), University Tutorial College and People's Palace; John Sydney Bailey (i., iii., vi.), University College, Sheffield; Anne E. A. Baker (iv., v., vii.), Bedford College, London; George William Baker (iv., v., viii.), private study; Frank Barlow (v., vi., ix.), Royal College of Science and private study; George Robert Barnard (i., ii., iii.), King's College and private study; S. E. Baynes-Smith (v., vi., vii.), University College, Sheffield; John Cardew Bedwell (iv., v., viii.), private study and University Tutorial College; Mary Bell (i., iii., iv.), Ladies' College, Cheltenham; Emily Mary Berridge (i., iii., v.), Royal Holloway College; Agnes G. D. Bigby (i., iii., v.), University College and University Tutorial College; Arthur William Bird (i., ii., iii.), private study and University College, Nottingham; Stuart Blofeld, B.A. (i., ii., iv.), University Tutorial College, Birkbeck Institute, and private study; Ernest Edward Brooks (i., iii., iv.), private study; Alfred Edwin Case (i., iii., iv.), Mason University College; Thomas John Cheater (iv., v., ix.), Finsbury Technical College and private study; Herbert Richard Chilton (i., iii., iv.), private study; Ernest Clark (i., iii., iv.), University College, Sheffield; John Alexander Clark (i., ii., ix.), and Ethel M. Conder (i., v., viii.), University College, Aberystwith; Arthur Sambell Cox (i., ii., iii.); Hartley College and Royal College of Science; Ernest Crosland (ii., iii., iv.), Royal College of Science and private study; Alexander N. Crosskey (ii., iv., viii.), private study and Carlyon College; Thomas Crosland (i., ii., iii.), Firth College and University College, Bristol; Robert Crosthwaite (i. iii., iv.), private study; L. A. E. De Zilwa (vi., vii., ix.), University College and private study; G. T. Dickin, B.A. (i., ii., iii.), Kingswood School and private study; Edwin Henry Dixon (i., iii., iv.), University College, Bristol; Ernest E. L. Dixon (v., vi., viii.), Royal College of Science; Charles Vickery Drysdale (i., ii., iii.), private study; H. B. Dutton, B.A. (iv., viii., ix.), Owens College and private study; Charles G. Fernie, B.A. (i., iii., iv.), University Tutorial College and private study; Margaret S. Freeman (i., ii., vi.), University College, Aberystwith; Felix Fritsch (v., vi., viii.), private study and University Tutorial College; Ernest Goulding (iii., iv., v.), Pharmaceutical Society and University Tutorial College; Edward Graham Guest (iv., viii., ix.), private study; Henry L. Heathcote (i., iii., iv.), Mason University College; Henry Arthur Hinton (v., viii., ix.), Royal College of Science, Birkbeck Institute, and private study; Francis William Hodges (iv., v., vi.), University Tutorial College; Fred Hodson (i., ii., iii.), University College; Sarah Ann Hunt (iv., viii., ix.), University College and private study; Alfred Edward Ikin (i., ii., ix.), private study; Albert Joseph James (i., ii., iv.), private study and tuition; Marguerite Jefferies (i., iv., viii.), Westfield and University Colleges; John Henry Leonard (v., vi., viii.), King's and University Colleges and private tuition and study; Louis Lownds (i., ii., iii.), University College, Nottingham; Thomas Luxton, B.A. (i., ii., iv.), private study; Hugh Main (iv., v., vi.), Birkbeck Institute and University Tutorial College; Edward Daniel Mason (i., iii., iv.), Mason University College; John Beurle Miles (v., viii., ix.), Carlyon College and Birkbeck Institute; Harold Moore (iii., iv., ix.), Middlesbrough High School and private study; Arthur Mort (iii., iv., viii.), Royal College of Science, Dublin, and Salford Tutorial Institute; Alexander Morton, B.A. (v., vi., viii.), Heriot Watt College, Edinburgh and private study; R. Mundy, B.A. (v., vi., viii.), Owens College; John H. Nightingale (iv., v., viii.), private study and University Tutorial College; Albert Ernest H. Pakes (iv., vii., ix.), Guy's Hospital, Carlyon College, and private study; James Parsons (iv., viii., ix.), University College, Bristol; Ernest Alfred Pinchin (iii., iv., vi.), private study and Birkbeck Institute; Peter Polding Platt (i., ii., iii.) and Percy Rawlinson (i., ii., iii.), private study; William C. Reynolds (iii., iv., viii.), Royal College of Science; Samuel S. Richardson (i., ii., iii.), Royal College of Science and private study; Winnifred M. Ross (v., vi., viii.), University Colleges, Aberystwith and Liverpool; Edward Russell (iii., iv., v.), private study and Birkbeck Institute; F. H. Shoosmith (iii., vii., ix.), University Tutorial and King's Colleges and private study; Cyril J. Silverston (iii., iv., viii.), Mason University College; Charles Simmonds (iii., iv., viii.), University Tutorial College and Birkbeck Institute; Robert Walter Sloley (i., ii., iii.), private study; Clarence Smith (i., iii., iv.), Royal College of Science and private study; Lilian B. Voss Snook (i., ii., iii.), University College, Bristol; Margaret Emma Taylor (i.,* ii., iv.), Bedford College, London; Albert Edward Thomas (iii., iv., v.), Merchant Venturers' Technical College and University College, Bristol, and private tuition; Frank Norman Tinkler (ii., iii., iv.), University College, Bangor, and Royal College of Science; Elinor A. N. Twigg (v., vi., viii.), Mason University College; Winifred Esther Walker (i., iii., v.), University College, Bristol; George Hardstaff West (i., iii., iv.), Mason College, Royal College of Science, and private tuition; Michael Edgar White (i., iii., iv.), University College, Aberystwith; William Morris Williams (i. ii., iii.), University College, Bangor; Ernest Witham, B.A. (i., iii., iv.). University College, Sheffield; and P. Malcolm Wright (i., iii., ix.), private study and University Tutorial College.

* The numerals in parenthesis indicate branches of the examination.

SOCIETY OF APOTHECARIES OF LONDON.—In November the following candidates have passed in the subjects indicated:—

Surgery.—W. H. I. Bathurst (Section I.), London Hospital; B. R. R. Cheesman, Charing Cross Hospital; R. L. D. Dewdney, King's College Hospital; E. E. Evans, Royal Free Hospital; J. B. Hall (Section I.), Leeds; J. Welsh, Dublin; and J. M. Wood, Middlesex Hospital.

Medicine.—H. J. De Saram, Middlesex Hospital; J. B. H. Scott, Leeds; T. J. Vick, Guy's Hospital; and A. F. Weston (Section II.), St. George's Hospital.

Forensic Medicine.—J. B. H. Scott, Leeds; and T. J. Vick, Guy's Hospital.

Midwifery.—G. H. Bedford, Guy's Hospital; R. F. Ellery, St. Bartholomew's Hospital; J. B. Hall, Leeds; P. O'Sullivan, Dublin; J. B. H. Scott, Leeds; and H. J. Watts, Manchester.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: Messrs. E. R. R. Cheesman, H. J. Watts, J. Welsh, and J. M. Wood.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berne:* Dr Wilhelm Zimmermann, prosector of the Anatomical Institute, has been appointed Extraordinary Professor of Anatomy. *Geneva:* Dr. de Marignac has been appointed to the chair of Gynæcology. *St. Petersburg (Military Medical Academy):* Professor A. Lebedeff has been appointed to the chair of Midwifery and Gynæcology in succession to the late Dr. K. Slavianski.

PRESENTATIONS TO MEDICAL MEN.—At the last of the course of ambulance lectures provided by the Surrey County Council Technical Education Committee given by Mr. Laurence Potts, M.R.C.S. Eng., of Leatherhead, on Nov. 10th, he was the recipient of an engraved silver cigarette case as a token of appreciation of his services.—On Nov. 12th, at the Wicker Congregational Lecture-hall, Burngreave-road, Sheffield, the Lord Mayor of the city presented certificates to the successful members of the Midland Railway Goods Department, Sheffield, Ambulance Class and afterwards presented Mr. John H. Brown, M.D. Edin., lecturer to the class, with an electro-plated flower-stand bearing this inscription, "Presented by the Midland Railway Ambulance Class to their lecturer, J. H.

Brown, M.D., November, 1898."—In the Bath Hotel, Glasgow, on Nov. 18th, in the presence of a large meeting of friends, Mr. D. Campbell Black, M.D. Glasg., was presented with his portrait painted in oils. The Rev. Dr. Maclean, St. Columba Church, presided, and in presenting the portrait expressed the hope, on behalf of Dr. Black's many friends, that he might long be spared to adorn his profession and to continue his unselfish work in the community.

COLSTON DAY IN BRISTOL.—Colston Day was celebrated at Bristol in the usual manner on Nov. 14th, and the customary banquets took place in the evening, at which the collections for the various charities amounted to £4355, as against £3551 in 1897.

THE TALLERMAN TREATMENT AT BADEN.—The Tallerman apparatus has been placed in the Landesbath and has been visited there by the Grand Duke and his guests. It is not often that the Germans borrow an idea in practical therapeutics from the English; we therefore note the adoption of the Tallerman system at Baden with interest.

A CLERGYMAN ON SANITATION.—The Rev. D. Watcyn Morgan, vicar of Morriston, in the course of his sermon on Nov. 13th, is reported to have said that "diphtheria is now prevalent in our midst and many parents, made disconsolate by the deaths of their children, in their moments of despair have doubtless felt inclined to blame Providence. Do not blame Providence: blame the Swansea corporation, and blame yourselves for allowing the laws of sanitation to be ignored."

QUEEN'S FACULTY OF MEDICINE, MASON UNIVERSITY COLLEGE, BIRMINGHAM.—The annual dinner of the medical students (present and past) of this faculty was held at the Grand Hotel, Birmingham, on Nov. 10th, Mr. Frank Marsh presiding, Mr. Lucas and Mr. Leedham-Green being the Vice-presidents. Many past students and members of the hospital and college staffs were present, including Sir James Sawyer, Mr. Jordan Lloyd, Mr. Haslam, Mr. Eales, Dr. Foxwell, Mr. Gamgee, Mr. Morrison, Dr. Kauffman, Dr. Russell, Mr. Heaton, Dr. Thomas Wilson, and Captain Nott, I.M.S. Letters of apology were received from Sir Walter Foster, Dr. Windle (Dean), Dr. Heath (Principal of the College), Dr. Robert Saundby, Dr. Simon, Mr. Gilbert Barling, Dr. Chavasse, Dr. Carter, Mr. Bennett May, Mr. Priestley Smith, Dr. Douglas Stanley, and others. After proposing the toast of "The Queen," which was enthusiastically received, the President gave "The Students, Past and Present." He referred to the [many men of distinction who acknowledged the Birmingham Medical School as their *alma mater*. It was with very great pleasure that he was able to welcome such a large number of present students to this dinner. Meetings of this kind helped to promote that *esprit de corps* and feeling of good-fellowship which was so essential in the medical profession. He referred with emphasis to the important part which athletics played in a man's career. He advised students to take their part in sports, adding that "a good athlete is a good student." He alluded to the active duties of a medical man on the battle-field, mentioning the recent Soudan campaign as evidence of the laborious and unceasing toil of medical men at the front. Sir James Sawyer responded to the toast on behalf of the past students, urging on qualified men the necessity of taking up a hobby of some description so as to give them relief and change from their professional duties. Mr. Satchwell Smith replied for the present students. Mr. Eales then proposed the toast of "The Medical School," congratulating the students on the excellent opportunities afforded them, and expressing the hope that some day all the hospitals in Birmingham would be amalgamated for the purpose of clinical study. Mr. Haslam (honorary secretary, Clinical Board) responded, remarking that in his opinion the Birmingham Medical School was second to none in the kingdom. Mr. C. Leedham-Green proposed the toast of "The Visitors," to which Mr. H. A. Pearson (coroner for South Staffordshire) responded in a humorous speech. Mr. Jordan Lloyd proposed the toast of "The Officers of the Dinner," mentioning the cordial relations which he was pleased to say existed between the teachers and those taught. Mr. Lucas and Mr. F. W. Bywater suitably responded. A short musical programme brought the proceedings to a close.

THE AUTUMN MEETING OF THE IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—The autumn general meeting of the above Association, which now numbers 750 members, was held on Wednesday, Nov. 23rd, at the Café Monico, the President, Dr Mapother, being in the chair. There was a large attendance of members. A vote of thanks was given to Dr. Abraham for his admirable conduct of the business of the association as chairman of the Council during the three years just concluded and a similar compliment was paid to Mr. O'Callaghan for his services in promoting the success of the gatherings of the society during the last two years. A new rule was passed enabling the erasure of the name of any member from the roll whose name had been removed by the General Medical Council from the Medical Register. An addition was made to the list of officers of the association, on account of the increasing number of provincial members, in the person of a vice-president of the Council. The chairman of the Council announced that it was the intention of the Council to immediately consider the question of how far the association could further the movement on the part of the Universities of Ireland for obtaining powers to deprive of their degrees those who had committed any offence leading to a conviction in courts of law or deprivation of the right to have their names on the Medical Register. The members and their friends, to the number of 161 subsequently proceeded to dinner. Sir William Mac Cormac Bart., K.C.V.O., President of the Royal College of Surgeons of England, whose health was proposed in a highly laudatory speech by Dr. Mapother, gave some interesting details of his past professional life and said that much of his success was due to the support and encouragement which he had received from, first, his wife and, secondly, his medical brethren in London. A large number of ladies were present, including Lady Mac Cormac. The evening was] enlivened by Irish songs rendered by Miss Gladys Grove, R.A.M., and Mrs. S. F. Freyer, Miss Maud Jaques being at the piano.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

AHRENS, H., L.S.A., has been appointed a House Surgeon for the Royal Ear Hospital, Soho-square, London, vice John Fallows, deceased.

BAILEY, T. R., M.D. Edin., has been appointed a Public Vaccinator for the No. 1 District at Bilston.

BEDDARD, WILLIAM OLIVER, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Hospital, Dover.

BOND, FRANCIS THOMAS, M.D. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Thornbury Guardians and District Council.

BRADBURNE, A. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a House Surgeon for the Teignmouth Hospital, vice E. P. Hasluck.

BROWN, HAYDN, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Urban District Council of Buckhurst Hill.

BRUSHFIELD, ARCHIBALD N., M.R.C.S., L.R.C.P., has been appointed a Senior House Surgeon to the Macclesfield Infirmary.

BURTON, E. T., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Workhouse Infirmary, Birmingham.

CLARKE, F. A. H., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Beech Avenue Workhouse, parish of Nottingham.

GIBBON, A. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the St. Mary's District of the Bury St. Edmunds Incorporation.

GRANT, W. TORREY, M.B., C.M. Edin., has been appointed Delegate for Sweden and Norway to the Quarantine Board of Egypt.

GREENWOOD, A. C., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Burton Coggles Sanitary District of the Grantham Out-relief Union.

HEFFERNAN, H. H., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Wolston Sanitary District of the Rugby Union.

HORROCKS, HERBERT, M.D., B.Sc. Lond., M.R.C.S., L.R.C.P., D.P.H., has been appointed Honorary Assistant Physician to the Public Hospital, Perth, West Australia.

KENDRICK, GEORGE, L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer and Public Vaccinator for the No. 2 Medical Relief District at Bilston.

MACKENZIE, JOHN W., M.B., Ch.B. Edin., has been appointed Assistant House Physician to the Cardiff Infirmary.

MCKINLAY, JOHN R., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Gordon-road Workhouse of the parish of St. Giles, Camberwell.

MORGAN, JOHN H., M.A. Oxon., F.R.C.S., has been appointed Examiner in Surgery for the University of Oxford.

PIRIE, W. R., M.B., C.M., A.M. Aberd., has been appointed Assistant Anæsthetist for the Royal Infirmary, Aberdeen.

PRICHARD, A. HEAWORD, M.R.C.S., L.R.C.P., has been appointed a House Surgeon to the Cancer Hospital, Brompton, S.W.

RATTRAY, P. W., M.B., C.M. Aberd., F.R.C.S. Eng., has been appointed a Medical Officer for the temporary Highgate Hill Workhouse.

ROBERTSON, WM., M.D. Glasg., D.P.H. Glasg., has been appointed a Factory Certifying Surgeon, vice P. A. Simpson.

ROWLEY, OSWALD F., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Beckett Hospital and Dispensary, Barnsley, vice Edward Jeffery, deceased.

SCOTT, CHARLES R., M.B. Edin., has been appointed Assistant Medical Officer to the Warneford Asylum, Oxford.

STANTON, T. W., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Osbournby Sanitary District of the Sleaford Union.

THOMSON, A., M.B., C.M. Edin., D.P.H. Camb., has been re-appointed a Medical Officer of Health by the Stratford-on-Avon Urban and Rural District Council.

VERNON, W., L.R.C.P. Edin., M.R.C.S., has been re-appointed a Medical Officer for the North Stoke Sanitary District of the Keysham Out-relief Union.

WILLETT, G. G. D., M.R.C.S., has been re-appointed a Medical Officer for the second and Kelston Sanitary Districts of the Keynsham Out-relief Union.

WILLIAMS, RALPH PAUL, M.B. Lond., has been appointed a House Surgeon to the Hospital for Sick Children, Great Ormond-street, London.

WYLLIE, JOHN, M.D., F.R.C.P. Edin., M.R.C.S., has been appointed *pro tem.* a Medical Officer for the Edinburgh Royal Infirmary during Professor T. R. Fraser's absence in India.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

BEDFORD COLLEGE, LONDON, FOR WOMEN, York-place, Baker-street, W.—Professorship of Hygiene.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Birmingham.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BRISTOL CITY LUNATIC ASYLUM, Fishponds, Bristol.—Medical Assistant, unmarried. Salary £120 per annum, increasing by £10 a year to £150, with furnished apartments, board (except beer, &c.), and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-Inn-road, W.C.—Assistant Surgeon.

CITY ASYLUM, Gosforth, Newcastle-upon-Tyne.—Assistant Medical Officer, unmarried. Salary £130 a year, with furnished apartments, board, &c. Salary rising £10 per annum up to £150.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CROYDON UNION.—Resident Assistant Medical Superintendent and Dispenser at the Infirmary, Mayday-road, Croydon. Salary £100 per annum, increasing £10 annually to a [maximum of £130, with furnished apartments, rations as per scale, and washing. Applications to the Clerk to the Guardians, Union Offices, Mayday-road, Thornton-heath.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician. Board, residence, &c., provided, and an honorarium of £25 will be granted on the completion of six months' approved service.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeoncy for six months. Board, residence, and washing provided.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House Surgeon, unmarried. Salary £80 per annum, with board and lodging in the hospital.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Physician for six months, unmarried. Salary £20, with board and residence in the hospital.

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80, with residence and maintenance.

LONDON LOCK HOSPITAL, Harrow-road, and 91, Dean-street, Soho.—Registrar. Applications to the Secretary, Harrow-road, W.

MASON UNIVERSITY COLLEGE, Birmingham.—Lecturer on Osteology and Chief Demonstrator of Anatomy.

PRESTWICH COUNTY ASYLUM, Manchester.—Assistant Medical Officer, unmarried. Salary £100, rising £25 yearly to £250, with board, lodging, and washing.

ROYAL BERKS HOSPITAL, Reading.—Assistant Medical Officer for six months. Board, lodging, and washing provided. An honorarium of ten guineas will be awarded conditionally.

ROYAL INFIRMARY, Hull.—House Surgeon, unmarried. Salary 100 guineas per annum, with board and furnished apartments.

ST. LUKE'S HOSPITAL, Old-street, London, E.C.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

ST. MARY'S HOSPITAL, Quay-street, Manchester.—House Surgeon and Resident Obstetric Assistant Surgeon for twelve months. Salary £100 per annum, with board and residence.

SALOP INFIRMARY.—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum.

UNIVERSITY OF GLASGOW.—Five Examinerships in Medicine for three years each. Salaries £30 and £50 respectively.

WEST-END HOSPITAL FOR NERVOUS DISEASES, Welbeck-street, W.—Qualified Dispenser. Salary £120.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Honorary Physician Accoucheur, and for Diseases of Women.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £75 per annum, with board, residence, &c.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon, for six months.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum, with furnished rooms, board, gas, coal, and attendance

Births, Marriages, and Deaths.

BIRTHS.

EDGECOMBE.—On Nov. 14th, at 2, Royal Villas, Station Parade, Harrogate, the wife of Wilfrid Edgecombe, M.D. Lond., F.R.C.S. Eng., of a daughter.

GRINLING.—On Nov. 21st, at Dene House, Walker-on-Tyne, the wife of Fred. N. Grinling, M.R.C.S., L.R.C.P., of a daughter.

POPE.—On Nov. 18th, at 74, Mortimer-street, Cavendish-square, W., the wife of Percy Pope, of a daughter.

RYGATE.—On Nov. 16th, at Horwood House, Witham, Essex, the wife of H. B. Rygate, B.A., M.B., B.S., F.R.C.S., of a son.

STORRS.—On Nov. 21st, at Springfield, Chelmsford, the wife of Kennet S. Storrs, M.B., B.C. Cantab., of a daughter.

THOMSON.—On Nov. 14th, at Payton House, Stratford-on-Avon, the wife of Arthur Thomson, M.B., of a daughter.

DEATHS.

CHEETHAM.—On Nov. 18th, Charles Francis Cheetham, M.R.C.S., L.R.C.P., aged 33 years, second son of the late Charles Henry Cheetham, of York-place, Manchester.

MCKENDRICK.—On Nov. 18th, at Maxieburn, Stonehaven, Mary Souttar, wife of John Gray McKendrick, Professor of Physiology in the University of Glasgow.

MITCHELL.—On Nov. 19th, at Brookwood, Hollington, St. Leonards-on-Sea, Robert Nathaniel Mitchell, M.D., formerly of Brockley, S.E., aged 64 years. Friends will kindly accept this the only intimation.

SMITH.—On Nov. 21st, at his residence, Church Green House, Reddit William Smith, M.R.C.S., J.P., aged 81 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (30th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

THURSDAY (1st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex, (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (3rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (28th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. P. Gould: A Consideration of the Value of Pressure in the Treatment of Wounds.

THURSDAY (1st).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchbourne-street, Edgware-road).—8.30 P.M. Dr. W. Ewart: Disease, its Treatment and the Profession of Medicine in 1899. (Harveian Lecture.)

FRIDAY (2nd).—CHARITY ORGANISATION SOCIETY (Portman Rooms, Baker-street, W.).—4.30 P.M. Mr. F. G. P. Neison: Sick Insurance. (Course of Lectures on Medical Relief.)

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Mr. Cheatle, Mr. Wingrave, Mr. Lake, Dr. Bond, Dr. Spicer, Dr. Grant, Dr. Tilley, Dr. Hill, and others.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith, W.).—8 P.M. Clinical Evening. Dr. F. H. Alderson: Recovery from Cirrhosis of the Liver.—Mr. S. Edwards: (1) Operation for Encysted Hernia; (2) Urinary Extravasation following Urethrotomy.—Mr. C. B. Keetley: Three Cases of Fractured Olecranon after Operation.—Mr. McA. Eccles: Cases of Swellings in the Parotid and Submaxillary Glands.—Dr. J. B. Ball: Rheumatoid Arthritis in a Boy.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Dr. A. E. Sansom: Some Practical Points in the Treatment of Heart Disease. (Purvis Oration.) Mr. T. Moore: Demonstration of Roentgen Rays. Exhibition of Microscopical Specimens, Surgical Instruments, &c. Conversazione.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (28th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. H. Tilley: Demonstration of Selected Cases (Ear, Throat and Nose).

TUESDAY (29th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-sq., W.C.).—3.30 P.M. Mr. Balance: A Case of Fifth Nerve Neuralgia treated by Operation.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—4 P.M. Dr. H. Campbell: Cases of Muscular Rigidity.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. P. Abraham: The Surgery of the Skin.—Bethlem Hospital, 2 P.M., Dr. Craig: Moral and Impulsive Insanities and Lunacy Law.

WEDNESDAY (30th).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Biss: Principles of Treatment of Pulmonary Tuberculosis.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Disinfection and Disinfectants.

THURSDAY (1st).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum Cleveland-st., W., 5.30 P.M., Mr. J. Cantlie: Splenic Enlargements.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Wallis: On Some Rectal Disorders. (Post-Graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Colman: Demonstration of Selected Cases.

FRIDAY (2nd).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. A. Beddard: Clinical Examination of Urine.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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AN UNSIGNED MANUSCRIPT.

"*On the Bacteriological Diagnosis of Diphtheria and the Desirability of providing Local Facilities for its use by the Profession Generally.*"—A manuscript bearing the above title is in our possession. It bears neither name of an author nor an address. Will the author kindly communicate with us?

A POINT OF ETIQUETTE.

A CORRESPONDENT writes as follows:—"A and B are medical men practising in the same town. One of A's patients calls on him with an urgent request that he will see his wife. A is not at home and on his return finds a letter from the patient saying that as the case did not permit of delay he had called on A's partner, but not finding him at home had obtained the services of B, so that it would not be necessary for A to call at present. A writes to B thanking him for his courtesy in seeing the case. Previously, however, to receiving this letter B notifies A that the patient has called on him (B) asking him to attend his wife in future. A thereupon forwards to B the patient's explanatory letter and intimates that he considers B should decline further attendance. B replies that he has adopted this course. The patient then calls on A, apologising for

having called in B, regretting A was not at home, and pleading the emergency of the case. In reply to A's query as to why B had continued attending when A was available he states it was at his request, as his wife was about to proceed to London in a couple of days and it did not appear necessary to 'change doctors.' On the following morning B meets A and informs him that on the previous evening the patient had called on him requesting him to continue attendance and suggests that it shall be left to the patient's option as to whom he will send for in future. A demurs to this proposal, urging that such will constitute the patient an arbiter in a matter of professional etiquette and again calls on B to retire from the case, maintaining that had either he or his partner been at home B would not have been sent for. B absolutely refuses to surrender the case and states that he intends to attend in future whenever summoned. A then writes to the patient pointing out his very inconsistent conduct and demanding an explanation, and receives a reply to the effect that he wishes B to attend in future. Under these circumstances, (1) was B justified in continuing attendance after the real facts of the case were notified to him by A? and (2) is he justified in continuing to act as medical attendant to the family?"

*** The routine dictated by professional etiquette and no less by good feeling is well known. When a practitioner is called to an urgent case usually attended by another medical man he must, when the emergency is provided for, resign the case. But seeing that the patient was only to be two more days under a medical man's care in this neighbourhood we can understand her husband's feeling in desiring that no change should be made in her medical adviser. It seems probable that matters could have been arranged in this way amicably if A, B, and the husband had conferred together. Is it too late for such a meeting? B ought not to attend the patient, but, judging from the statement of one side only, it seems quite clear that if B does not attend A will not be asked to attend. Such a situation would only punish the patient and her husband, who are not supposed to know all about medical etiquette.—ED. L.

MONSTERS.

To the Editors of THE LANCET.

SIRS,—Can you kindly inform me where I could find the best description of anencephalic monsters and of congenital deficiencies of the skull? I am, Sirs, yours faithfully,

Nov. 20th, 1898. J. B. ADDISON.

*** Our correspondent should consult Hirst and Piersol: "Human Monstrosities," part ii., Pentland, 1892; Hughes: THE LANCET, Dec. 17th, 1887, p. 1212; and Lancereaux: "Anatomie Pathologique," vol. i., Delahaye, 1875.—ED. L.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—I am much exercised to know what to do with a young fellow of feeble intellect who is without relatives to take charge of him, but who is in possession of a small capital which provides about £50 per annum. He has been for some years past in a provincial town, but as he gets older he becomes more troublesome and has lately given much annoyance. He is not vicious at all, but his vagaries take an obtrusively religious form mingled with much vanity. Personally I think he would be better under certificates, but he cannot be treated as a pauper and it is difficult to find suitable quarters for him where the available income is so small. If any of your readers could help me I shall be most grateful. I am, Sirs, yours faithfully,

Nov. 18th, 1898. G. H.

"SCARLATINIFORM ERUPTIONS IN INFLUENZA."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 12th "Eruption" asks for information regarding cutaneous rashes accompanying attacks of influenza. A reference to the "Medical Digest," Section 655:1, will show that they have been described since 1890 by both English and foreign observers.

I am, Sirs, yours faithfully,

RICHARD NEALE, M.D. Lond.

Finchley-road, Hampstead, N.W., Nov. 17th, 1898.

ENDERMIC MEDICATION.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me through THE LANCET whether there is an institution in London where the endermic treatment of syphilis by mercury is carried out? I have a patientwhom I am anxious to send over. I am, Sirs, yours faithfully,

Nov. 22nd, 1898. VIENNA.

*** We do not know of any institution specially devoted to this method.—ED. L.

THE TENDER MERCIES OF THE PARAGRAPHIST.

THERE is an amusing little paper called *M. A. P.*, edited, we believe, by a Member of Parliament who is also a very able journalist. Therefore we are sorry to see twaddle of the kind we quote admitted into its columns, and we are quite sure that Miss Arabella Kenealy and Dr. Jane Walker will not be particularly pleased at being bracketed with irregular practitioners like "Dr. Muriel Maitland King" and "Dr. Longshore Potts." We learn that "Dr. Muriel Maitland King, the nerve specialist, has an extensive and fashionable *clientèle*, and at her parties in Park-street, W., one is sure to meet many social stars." This lady also finds time to give "most interesting lectures on various phases of nervous exhaustion, insomnia, *embonpoint*, and other subjects attractive to women." The paragraphist kindly informs us that Dr. Longshore Potts is over sixty years of age, and he waxes eloquent over the complexion and manners of Miss Kenealy and Dr. Walker. We are quite certain that the two latter ladies have nothing to do with the insertion of these particulars, but we hoped for better things from the editor of *M. A. P.*

TREATMENT OF VARICOSE ULCER.

To the Editors of THE LANCET.

SIRS,—I shall be very glad if any of your readers could suggest a method of treatment for the following condition. The patient, an elderly woman, has suffered for several years from a large varicose ulcer on the lower and inner third of the right leg. The ulcer is 3 in. in length and 1¼ in. in breadth, the surrounding tissues are hard and inflamed, and the pain is very severe at times. Complete rest in bed for some weeks has been tried, but with little success, likewise indiarubber bandaging, strapping the limb, &c., have received their due share of attention, while various lotions and ointments have been applied to the surface of the wound. The patient has become reconciled to the ulcer if she could obtain relief from the almost constant pain, and therefore I should be glad to hear of any lotion or ointment which would have the desired effect of relieving the pain.

I am, Sirs, yours faithfully,

Nov. 22nd, 1898. "ULCER."

Mr. James Griggs.—Our correspondent will find the names and addresses of various institutions of the kind in "Burdett's Hospitals and Charities" or "The Annual Charities Register and Digest" (Messrs. Longmans, Green and Co.).

Filter.—We see no novelty in the arrangement or in the material employed, and we very much doubt whether by this means a bad water would be made safe.

Mr. A. Bennett.—We never prescribe. If our correspondent's means do not permit of his calling in a medical man he had better seek advice at a hospital.

Kentigern.—The article referred to appeared in the *Asclepiad* in 1887, p. 301.

Worried.—We do not prescribe. The patient should consult a medical man.

S. E. H. has omitted to enclose his name and address.

Cape Colony.—We know of no such journal.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 24th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 18	30·32	S.E.	...	72	55	50	48	51	Cloudy
,, 19	30·19	E.	...	66	50	48	47	50	Cloudy
,, 20	30·14	S.W.	0·05	54	51	46	45	47	Cloudy
,, 21	30·04	ENE	0·42	50	50	47	48	50	Foggy
,, 22	30·04	N.E.	...	61	42	37	36	38	Cloudy
,, 23	29·44	S.	0·15	43	43	34	38	39	Raining
,, 24	28·95	S.	...	44	44	38	41	42	Raining

During the week marked copies of the following newspapers have been received: *Hampshire Post, Sussex Daily News, Craven Herald, Observer and Chronicle, High Peak News, Western Press, Manchester Guardian, United Service Gazette, Glasgow Herald, Newcastle Leader, Cambridge Express, Edinburgh Evening News, Dunstable Borough Gazette, West Middlesex Advertiser, Leicester Post, Times of India, Pioneer Mail, Yarmouth Independent, Liverpool Daily Post, Local Government Chronicle, Architect, Leeds Mercury, Citizen, Builder, Scotsman, Cambrian, Yorkshire Post, Bristol Mercury, Observer, Birmingham Mail, Cheltenham Free Press, East Essex Times, Portsmouth Times, Eastern Morning News, Le Courier de la Presse, Temperance Chronicle, Sanitary Record, Public Health Engineer, Reading Mercury, City Press, Hertfordshire Mercury, West Sussex Gazette, Local Government Journal, Surrey Advertiser, Yarmouth Independent, Nantwich Guardian, Kent and Sussex Post, Southport Visitor, Evesham Journal, Salisbury Express, Teesdale Mercury, Falkirk Herald, Poole Herald, Kelso Mail, Perth Constitutional, Newry Telegraph, Brighton Gazette, Todmorden News, Weekly Free Press and Aberdeen Herald, Evening Express (Cardiff), Devon and Exeter Daily Gazette, Kettering Observer, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. S. Arendrup, Newcastle-on-Tyne; *Anales de Oftalmología*, Mexico, Editor of; Messrs. Allen and Hanburys, Lond.; Dr. A. W. Allen, Wainfleet; Mr. J. B. Addison, Woolpit; Alpha, Lond.; Mr. R. B. Anderson, Lond.

B.—Mr. M. Bejarano, Madrid; Mr. J. P. Bush, Clifton; Messrs. J. B. Baillière et Fils, Paris; Brighton Throat and Ear Hospital, Hon. Secretary of; Mr. C. M. Bacharach, Lond.; Mr. L. A. Bidwell, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. W. and J. A. Bailey, Alloa; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. D. T. Bostel, sen., Cuckfield; Messrs. Bale, Sons, and Danielsson (Art Department), Lond.; Messrs. Bates, Hendy, and Co., Reading; Mr. P. W. Bassett-Smith, H.M.S. *Ganges*; Mr. F. E. Bennett, Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. J. C. Barker, Brighouse; Dr. J. Braithwaite, Leeds; Dr. H. W. L. Barlow, Manchester.

C.—Dr. G. Carpenter, Lond.; Mr. H. A. H. Claridge, Worthing; Clinical Research Association, Lond., Secretary of; Dr. D. Couper, Dennistoun; Messrs. T. Christy and Co., Lond.; Dr. L. Cobbett, Cambridge; Mr. W. F. Cole, Waco, Texas; City Asylum, Gosforth; Cortland Wagon Co., Lond.; Mr. F. W. Clarke, Manchester; Messrs. Cooper and Co., Lond.; Dr. G. W. Crowe, Worcester.

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E.—Messrs. Ellis and Co., Lond.

F.—Mr. M. M. P. Fraser, Manchester; F. E. S.; Mr. W. F. Furnival, Stone.

G.—Mr. J. Griggs, Lond.; Mr. I. S. Greenhalgh, North Wales; G. H.; Galignani Library, Paris.

H.—Dr. W. W. Hardwicke, East Moulsey; Dr. G. F. Hill, Lond.; Mr. G. Horder, Cardiff; Hull Royal Infirmary, Secretary of; Messrs. Haasenstein and Vogler, Geneva; H. C., Birmingham; Mr. M. Hall, Lond.; Dr. G. Hinsdale, Phila.; Messrs. T. W. Holmes and Co., Gateshead-on-Tyne; H. M.; H. J. R.

J.—Mr. Robert Jones, Liverpool; J. T. H.; J. T.

K.—Messrs. R. A. Knight and Co., Lond.; Mr. A. S. Kent, Lond.

L.—Dr. E. M. Lawrie, Hyderabad; L. H. E.

M.—Dr. C. G. MacNicker, Wembdon; Mr. H. Morris, Lond.; Messrs. Masson et Cie, Paris; Matto, Lond.; Lieutenant-Colonel D. Macpherson, Sidmouth; Mr. J. McMurtrie, Glasgow; Medical Society of Victoria, Hon. Secretary of; Medical, Surgical, and Hygienic Exhibitors' Association, Lond., Hon. Secretary of; Middlesex Hospital, Secretary of; Mr. J. R. McKinlay, Lond.; Mr. Chas. Wells Moulton, Buffalo, N.Y.; Messrs. Manlove, Alliott, and Co., Nottingham; Messrs. Mumford and Johnson, Bradford.

N.—Dr. J. H. Neale, Leicester; Newark-on-Trent Hospital, Secretary of; North London Nursing Association, Superintendent of; Nurses' Coöperation, Lond.

O.—Messrs. Orridge and Co., Lond.

P.—Mr. F. E. Firkis, Nutfield; Mr. J. Plummer, Sydney, New South Wales; Messrs. A. and F. Pears, Lond.; Dr. J. E. Platt, Manchester; Mr. R. Parker, Liverpool; Mr. J. F. Palmer, Lond.; Mr. M. Perceval, Thames, N.Z.

R.—Mr. R. Redpath, Newcastle-on-Tyne; Messrs. Robertson and Scott, Edinburgh; Rokeley, Bridge of Allan; R. H. B. N.

S.—Mr. Noble Smith, Lond.; Mr. W. R. H. Stewart, Lond.; Rev. L. Harding Squire, Kenley; Dr. G. A. Stephens, Swansea; Dr. Q. C. Smith, Austin, U.S.A.; Salford Corporation, Clerk of; Messrs. Street and Co., Lond.; St. Mary's Hospital, Manchester, House Surgeon of; Messrs. Spiers and Pond, Lond.; Mr. C. J. Symonds, Lond.; Messrs. W. H. Smith & Son, Manchester; Société Française d'Électrothérapie, Le Secrétaire Général, Paris; Sanitary Publishing Co., Lond.; S. E. H.; Dr. F. W. M. Stephenson, Blackburn; Sociedad Propagandista del Clima y Embellecimento, Málaga.

T.—Mr. W. T. Thomas, Liverpool; Dr. H. M. Tickell, Derby, Dr. F. S. Toogood, Lond.; Mr. G. H. Turner, Manchester; T. H.; Mr. W. Thomson, Nantwich; Tuborg Lager Beer Agency, Newcastle-on-Tyne; Dr. E. Trevithick, Cheltenham.

U.—University of London, Registrar of.

V.—D. Van Nostrand Company, New York; Dr. F. Vicars, Lond.

W.—Mr. W. Wheeler, Lond.; Dr. J. R. Wallace, Calcutta; Messrs. E. A. Williams and Co., Edgbaston; W. B. A.; Wills, Ltd., Lond.; Messrs. Welford and Sons, Lond.; Dr. D. White, Ashburton; West Ham Hospital, Secretary of; Worried, Rugby; Messrs. Wright and Co., Lond.; Messrs. Wright, Dain, Peyton, and Co., Birmingham; Western General Dispensary, Lond.; Wrexham Infirmary, Secretary of; Dr. W. Hale White, Lond.; W. S.; Messrs. Willing, Lond.; Messrs. R. F. White and Son, Lond.; West End Hospital for Diseases of the Nervous System, Lond., Secretary of; Mr. W. Southwick Willmore, Walsall.

Letters, each with enclosure, are also acknowledged from—

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